

EIC1700

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Kathleen Fuller, Team Leader, 308-4290, CP3/4 3D62

Voluntary Results Feedback Form

➤ *I am an examiner in Workgroup:* *Example:*

➤ *Relevant prior art found, search results used as follows:*

- 102 rejection
- 103 rejection
- Cited as being of interest.
- Helped examiner better understand the invention.
- Helped examiner better understand the state of the art in their technology.

Types of relevant prior art found:

- Foreign Patent(s)
- Non-Patent Literature
(journal articles, conference proceedings, new product announcements etc.)

➤ *Relevant prior art not found:*

- Results verified the lack of relevant prior art (helped determine patentability).
- Search results were not useful in determining patentability or understanding the invention.

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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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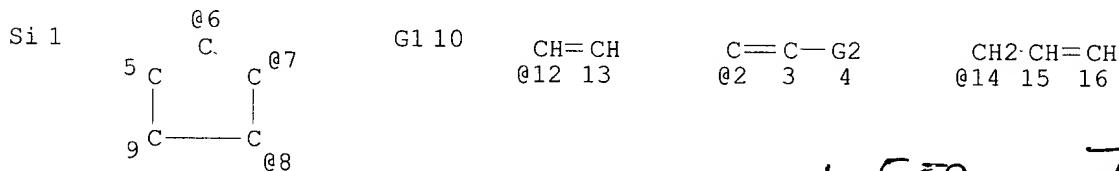
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FILE LAST UPDATED: 14 Jul 2002 (20020714/ED)

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=> D QUE
L27 STR



VAR G1=2/6/7/8

21,558 structures from
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VAR G2=12/14

NODE ATTRIBUTES:

CONNECT IS M3 RC AT 1
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GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
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STEREO ATTRIBUTES: NONE

L29	21558 SEA FILE=REGISTRY SSS FUL L27		
L30	9629 SEA FILE=HCAPLUS ABB=ON L29		
L31	11 SEA FILE=HCAPLUS ABB=ON	L30 AND (AUTOXID? OR AUTOXID?)	
L32	30 SEA FILE=HCAPLUS ABB=ON	L30 AND COATING?/SC, SX	
L33	1 SEA FILE=HCAPLUS ABB=ON	L31 AND COAT?/SC, SX, AB, BI	
L34	1 SEA FILE=HCAPLUS ABB=ON	L31 AND WEAR?	
L35	30 SEA FILE=HCAPLUS ABB=ON	L32 OR L33 OR L34	

=> D L35 ALL 1-30 HITSTR

L35 ANSWER 1 OF 30 HCAPLUS COPYRIGHT 2002 ACS
 AN 2002:332462 HCAPLUS
 DN 136:342258
 TI Partially resin-coated metal particles for electric contact with high reliability
 IN Wakiya, Takeshi; Morita, Takeharu; Hiraike, Hiroshi; Nagai, Katsutoshi; Taniguchi, Tatsuo
 PA Sekisui Chemical Co., Ltd., Japan
 SO PCT Int. Appl., 25 pp.
 CODEN: PIXXD2
 DT Patent
 LA Japanese
 IC ICM H01B005-00
 ICS C08F002-44; C08F292-00
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 76
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002035555	A1	20020502	WO 2001-JP4543	20010530
	W: CA, CN, JP, KR, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
PRAI	JP 2000-322974	A	20001023		
	JP 2000-322975	A	20001023		
	JP 2001-28324	A	20010205		
AB	Title elec. conductive particle is manufd. by partially coating a metal core with a resin layer via bonding between metal atom and functional groups. Thus, Au-plated particles were dispersed into the water soln. of thiol-terminated poly(vinyl alc.) in Ar atm. to obtain partially coated conductive particles.				
ST	vinyl alc gold graft copolymer coating conductive particle; partially resin coated metal particle elec contact reliability				
IT	Silanes				
	RL: MOA (Modifier or additive use); USES (Uses) (as coupler for treating metal surface in prepn. of partially resin-coated particle via metal-functional group bonding for elec. contact with high reliability)				

IT Electric insulators
(coatings; for partially graft-coating of conductive particle via metal-functional group bonding in elec. contact with high reliability)

IT Polymerization
(graft; in partial coating of metal particle via metal-functional group bonding for elec. contact with high reliability)

IT Polymerization
(metathetic, ring-opening; in partial coating of metal particle via metal-functional group bonding for elec. contact with high reliability)

IT Electric conductors
(particles; partially resin-coated via metal-functional group bonding in elec. contact with high reliability)

IT Coupling agents
(silane; in partial coating of metal particle via metal-functional group bonding for elec. contact with high reliability)

IT 2997-92-4, 2,2'-Azobisamidinopropane dihydrochloride 7787-70-4, Copper bromide (CuBr) 71071-44-8, 4,4'-Di-n-heptyl-2,2'-bipyridine 172222-30-9, Bis(tricyclohexylphosphine)benzylidene ruthenium dichloride
RL: CAT (Catalyst use); USES (Uses)
(as catalyst for partially graft-coating metal particle via metal-functional group bonding in elec. contact with high reliability)

IT 13688-90-9, (p-Chloromethyl)phenyltrichlorosilane 18245-94-8
79793-00-3, 2-(4-Chlorosulfonylphenyl)ethyltrichlorosilane
RL: MOA (Modifier or additive use); USES (Uses)
(as coupler for treating metal surface in prepn. of partially resin-coated particle via metal-functional group bonding for elec. contact with high reliability)

IT 107-96-0, Mercaptopropionic acid 148-18-5, Sodium N,N-diethyldithiocarbamate 73768-94-2, 11-Mercaptoundecanol
RL: MOA (Modifier or additive use); USES (Uses)
(for treating metal surface in prepn. of partially resin-coated particle via metal-functional group bonding for elec. contact with high reliability)

IT 416899-99-5P 416900-00-0P 416900-01-1P 416900-02-2P 416900-03-3P
416900-04-4P 416900-05-5P 416900-06-6P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(in partially coating of conductive particle via metal-functional group bonding in elec. contact with high reliability)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

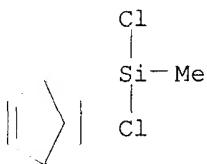
RE

- (1) Fuji Photo Film Co Limited; GB 2178182 A 1987 HCPLUS
- (2) Fuji Photo Film Co Limited; US 4761358 A 1987 HCPLUS
- (3) Fuji Photo Film Co Limited; JP 6217754 A 1987
- (4) Nippon Shokubai Kagaku Kogyo Co Ltd; JP 02300205 A 1990 HCPLUS
- (5) Soken Chem & Eng Co Ltd; JP 07105716 A 1995 HCPLUS
- (6) Soken Chem & Eng Co Ltd; JP 07105716 A 1995 HCPLUS

IT 18245-94-8
RL: MOA (Modifier or additive use); USES (Uses)
(as coupler for treating metal surface in prepn. of partially resin-coated particle via metal-functional group bonding for elec. contact with high reliability)

RN 18245-94-8 HCPLUS

CN Silane, bicyclo[2.2.1]hept-5-en-2-yl dichloromethyl- (9CI) (CA INDEX NAME)



L35 ANSWER 2 OF 30 HCAPLUS COPYRIGHT 2002 ACS
 AN 2002:31083 HCAPLUS

DN 136:87287

TI Wear-resistant **coating** composition and producing a
 coating for traffic marking compositions

IN Brown, Ward Thomas

PA Rohm and Haas Company, USA
 SO Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C09D005-00

CC 42-7 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 1170340	A1	20020109	EP 2001-305396	20010621
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	CN 1330120	A	20020109	CN 2001-117567	20010703
	JP 2002088314	A2	20020327	JP 2001-204922	20010705
PRAI	US 2000-216234P	P	20000705		

AB Traffic-marking compns. include an **autoxidizable** alkoxy silane and a polymer binder emulsion, optionally, bearing **autoxidizable** groups or groups reactive with compds. resulting from the oxidn. of an **autoxidizable** alkoxy silane. Thus, a traffic marking paint contg. acetoacetoxyethyl methacrylate-Bu acrylate-Me methacrylate copolymer latex and acrylic acid-Bu acrylate-Bu methacrylate-dimethylaminoethyl methacrylate-methacrylic acid-Me methacrylate copolymer base paint 100, 3-glycidoxypropyltrimethoxysilane ester with Pamolyn 200 0.36, MeOH 1.42 and Co drier 0.49 g was **coated** onto concrete and dried showing wear 0.06 cm² removed between 34-47,000 rotations of a test wheel.

ST **wear** resistance traffic marking **coating**; alkoxy silane emulsion acetoacetoxyethyl methacrylate copolymer binder **coating**

IT **Coating** materials
 (abrasion-resistant; **wear**-resistant **coating** compn.
 for traffic marking compns.)

IT **Driers** (for **coatings**)
 (cobalt based; latex binder for **wear**-resistant
coating compn. for traffic marking compns.)

IT **Coating** materials
 (traffic-marking; **wear**-resistant **coating** compn. for
 traffic marking compns.)

IT 87889-52-9P, Acetoacetoxyethyl methacrylate-butyl acrylate-methyl methacrylate copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (latex binder for **wear**-resistant **coating** compn. for
 traffic marking compns.)

Applicant

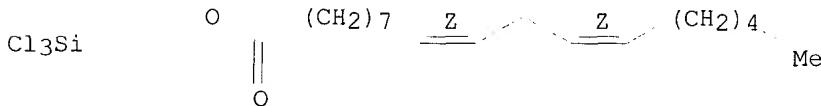
ICS B05D001-26; B05D005-00; B05D007-00; C09K003-00; G06F003-033;
G09F009-00; H01H013-70

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
Reprographic Processes)
Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001353808	A2	20011225	JP 2000-176268	20000613
AB	An oleophilic stain-preventing film and display and touch panel using the film are claimed. The film is manufd. by (1) contacting a soln. contg a chem.-adsorbing compd. having hydrophilic groups and oleophilic groups with a surface of the substrate and (2) removing the solvent and chem. bonding the hydrophilic groups with the surface of the substrate to arrange the oleophilic groups at outside direction. Stains (e.g. finger prints) are prevented on the display panel.				
ST	display panel strain preventing film; oleophilic hydrophilic group stain preventing film				
IT	Cathode ray tubes Electroluminescent devices Field emission displays Liquid crystal displays Plasma display panels (stain-preventing film for displays and touch panels)				
IT	Glass, uses RL: DEV (Device component use); USES (Uses) (stain-preventing film for displays and touch panels)				
IT	382141-52-8 382141-53-9 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (stain-preventing film for displays and touch panels)				
IT	382141-53-9 RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses) (stain-preventing film for displays and touch panels)				
RN	382141-53-9 HCPLUS				
CN	9,12-Octadecadienoic acid (9Z,12Z)-, 2-(trichlorosilyl)ethyl ester (9CI) (CA INDEX NAME)				

Double bond geometry as shown.



L35 ANSWER 4 OF 30 HCPLUS COPYRIGHT 2002 ACS
AN 2001:731248 HCPLUS
DN 135:295966
TI Polymeric organic coatings and method of manufacture thereof
IN Barton, Carlos L.; Seery, Thomas A. P.; Gao, Hanrong; Jacob, Jayanthi
PA World Properties, Inc., USA
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM H05B033-04
ICS C09K011-02; C09C003-10

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 42, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001074119	A1	20011004	WO 2001-US8911	20010320
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	US 2001038925	A1	20011108	US 2001-813641	20010321
PRAI	US 2000-192126P	P	20000324		
AB	Electroluminescent lamp are described in which a component (e.g., an electrode or phosphor particle) of the lamp has a hydrophobic, polymeric org. coating, comprising a tethering layer on the exterior of each electroluminescent device component and a hydrophobic org. polymer coating covalently bound to the tethering layer or, alternately, a hydrophobic org. polymer coating covalently bound to an oxide (e.g., SiO ₂) disposed on an outer surface of the component. Methods of making a hydrophobic, org. polymeric coating on a component for an electroluminescent device are described which entail forming a tethering layer of small mols. on an outer layer of the component, wherein the tethering layer has a plurality of initiator groups external to the tethering layer surface; and polymg. hydrocarbon monomers from the initiator groups to form a hydrophobic, org. polymeric coating attached to the tethering layer. Methods of making a hydrophobic, org. polymeric coating on a component for an electroluminescent device are also described which entail attaching a plurality of initiator groups external to a surface of the component; and polymg. hydrocarbon monomers from the initiator groups to form a hydrophobic, org. polymeric coating attached to the tethering layer.				
ST	electroluminescent device polymeric org coating; phosphor polymeric org coating electroluminescent device; electrode polymeric org coating electroluminescent device				
IT	Coating process Electric contacts Electrodes Electroluminescent devices Phosphors (electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)				
IT	Coating materials (hydrophobic; electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)				
IT	172222-30-9D, Benzylidenebis(tricyclohexylphosphine)ruthenium dichloride, reaction products with surface-bound mercapto compds.				
	RL: CAT (Catalyst use); USES (Uses) (electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)				
IT	78-10-4D, Tetraethoxysilane, reaction products 1633-78-9D, 6-Mercaptohexan-1-ol, reaction products with catalysts 4420-74-0D, 3-Mercaptopropyltrimethoxysilane, reaction products with catalysts 73768-94-2D, 11-Mercaptoundecan-1-ol, reaction products with catalysts 364329-22-6D, 9-Decene-1-thiol, reaction products with catalysts RL: DEV (Device component use); USES (Uses)				

(electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)

IT 25038-76-0DP, Polynorbornene, reaction products with surface-bound mercapto compds.
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)
(electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)

IT 1303-00-0, Gallium arsenide, uses 1306-23-6, Cadmium sulfide, uses 1314-96-1, Strontium sulfide 1314-98-3, Zinc sulfide, uses 1315-09-9, Zinc selenide 7631-86-9D, Silica, reaction products with hydrophobic org. polymers, uses 50926-11-9, Indium tin oxide
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)

IT 498-66-8, Norbornene 707-80-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)

IT 707-80-2DP, reaction products with surface-bound mercapto compds.
18245-94-8DP, reaction products with hydroxysilanes
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)

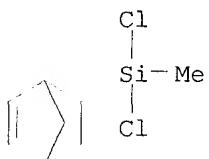
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Gen Electric Co Plc; WO 0005313 A 2000 HCPLUS
(2) Toyoda, M; US 4902929 A 1990

IT 18245-94-8DP, reaction products with hydroxysilanes
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(electroluminescent devices provided with components with polymeric org. coatings and their prodn. using surface-bound compds.)

RN 18245-94-8 HCPLUS
CN Silane, bicyclo[2.2.1]hept-5-en-2-yl dichloromethyl- (9CI) (CA INDEX NAME)



L35 ANSWER 5 OF 30 HCPLUS COPYRIGHT 2002 ACS
AN 2001:618075 HCPLUS
DN 135:196235
TI Polyolefin fiber-reinforced composites using a fiber coating composition compatible with ROMP catalysts
IN Sage, Donald B., Jr.
PA Owens Corning, USA
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C08K009-06

ICS C08L045-00; C08J003-24; C03C025-40

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001060903	A1	20010823	WO 2001-US3000	20010130
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2000-504050	A	20000214		
AB	A process for making a composite article comprising providing a coating compn. comprising a silane, optional pH modifying agent, and optional lubricant, wherein the silane is compatible with at least one ROMP catalysts used to initiate ring opening metathesis polymn. of the cycloolefin resins; coating fibers with the coating compn.; contacting the coated fiber with an uncured cycloolefin resin catalyzed using at least one ROMP catalysts used to form a resin and reinforcing fiber material mixt.; and curing the resin and reinforcing fiber material mixt. to form the composite article. Thus, a coating compn. comprising Z 6032 250, glacial acetic acid 40, and water 19,710 g was prep'd.				
ST	polyolefin reinforced composite coating compatible romp catalyst				
IT	Polyoxyalkylenes, uses RL: MOA (Modifier or additive use); USES (Uses) (lubricant; polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)				
IT	Polymerization catalysts (metathetic, ring-opening; polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)				
IT	Cycloalkenes RL: TEM (Technical or engineered material use); USES (Uses) (polymers; polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)				
IT	Coating materials Lubricants (polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)				
IT	Glass fiber fabrics Polyalkenamers RL: TEM (Technical or engineered material use); USES (Uses) (polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)				
IT	78-08-0, A 151 2530-85-0, A 174 2768-02-7, A 171 18401-43-9 , SIB 0992 34937-00-3, Z 6032 357165-45-8, Y 15242 357165-53-8, Y 9181 RL: TEM (Technical or engineered material use); USES (Uses) (coating materials; polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)				
IT	25322-68-3, Polyethylene glycol RL: MOA (Modifier or additive use); USES (Uses) (lubricant; polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)				
IT	64-18-6, Formic acid, uses 64-19-7, Glacial acetic acid, uses 77-92-9, Citric acid, uses 124-38-9, Carbon dioxide, uses 144-62-7, Oxalic acid, uses 7647-01-0, Hydrochloric acid, uses 13598-36-2, Phosphorous				

acid, uses

RL: MOA (Modifier or additive use); USES (Uses)

(pH modifier; polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)

IT 25038-78-2, Dicyclopentadiene homopolymer 25103-85-9, Cyclopentene homopolymer 25267-51-0, Cyclooctene homopolymer 25568-84-7, Cyclopentadiene homopolymer 25702-20-9 26426-65-3, Cycloheptene homopolymer 26710-12-3, Cyclobutene homopolymer 27056-69-5, Cyclododecene homopolymer 28702-45-6, Poly(1-octene-1,8-diyl) 39366-06-8, Cyclooctadiene homopolymer 68865-44-1 143237-78-9 148976-50-5 356055-45-3

RL: TEM (Technical or engineered material use); USES (Uses)

(polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Advanced Polymer Technologies; WO 9911958 A 1999
 (2) Ibm; EP 0240919 A 1987 HCPLUS
 (3) Smith Corp A O; WO 9911454 A 1999 HCPLUS

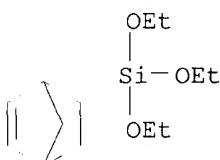
IT 18401-43-9, SIB 0992

RL: TEM (Technical or engineered material use); USES (Uses)

(coating materials; polyolefin fiber-reinforced composites using fiber coating compn. compatible with ROMP catalysts)

RN 18401-43-9 HCPLUS

CN Silane, bicyclo[2.2.1]hept-5-en-2-yltriethoxy- (9CI) (CA INDEX NAME)



L35 ANSWER 6 OF 30 HCPLUS COPYRIGHT 2002 ACS

AN 2001:195836 HCPLUS

DN 134:238987

TI Cure-on-demand, moisture-curable compositions having reactive silane functionality

IN Liu, Junkang Jacob; Leir, Charles M.; Moore, George G. I.; Sherman, Audrey A.; Everaerts, Albert I.; Boulos, Marie A.

PA 3M Innovative Properties Company, USA

SO U.S., 25 pp., Cont.-in-part of U.S. Ser. No. 815,029, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC C08G077-08

NCL 528023000

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI US 6204350	B1	20010320	US 1998-153967	19980916
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PRAI US 1997-815029 B2 19970314

AB A cure-on-demand, moisture-curable compn. comprises: (a) a compd. comprising mols. bearing reactive silane functional groups A[GSi(R_{23-p})OR_{1p}]_m wherein: moiety A is an m-valent radical selected from fluoroalkyl radicals, fluoroaryl radicals, and polymeric radicals

comprising a polymer selected from polysiloxane, polyolefin, polyester, polyphosphazene, fluorosilicone, fluorinated polyacrylate, fluorinated polyether, fluorinated polyester, and derivs. and combinations thereof; p is an integer from 1 to 3; m is an integer greater than or equal to 1; each R1 is individually selected from alkyl radicals and acyl radicals; each R2 is individually selected from hydrogen, alkyl radicals, acyl radicals and aryl radicals; and G is an optional linking moiety which, when present, links radical A to the reactive silane functional groups; and (b) an acid generating material that is free of ammonium salt and that liberates an acid that is capable of curing the moisture-curable compn.; wherein the reactive silane functional groups are the only acid curable groups present in the compn. and wherein av. reactive silane functionality of the moisture-curable compn. is greater than two. The acid generating material releases an acid upon exposure to heat, UV light, visible light, electron beam irradn. or microwave irradn. to initiate and accelerate the crosslinking reaction. Articles prep'd. using the moisture curable materials are also disclosed, as are methods of curing those materials.

ST silane functional moisture curable release coating

IT Onium compounds

RL: MOA (Modifier or additive use); USES (Uses)
(acid generating material; cure-on-demand, moisture-curable compns.
having reactive silane functionality)

IT Release coatings

(cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT Carboxylic acids, uses

Sulfonic acids, uses

RL: MOA (Modifier or additive use); USES (Uses)
(esters, acid generating material; cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT Polyesters, uses

Polyethers, uses

Polysiloxanes, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(fluorine-contg., silane functional group-contg.; cure-on-demand,
moisture-curable compns. having reactive silane functionality)

IT Coating materials

(linings, release; cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT Coating materials

(moisture-curable; cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT Polyethers, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(perfluoro, bis(triethoxysilane)-terminated; cure-on-demand,
moisture-curable compns. having reactive silane functionality)

IT Fluoropolymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(polyester-, silane functional group-contg.; cure-on-demand,
moisture-curable compns. having reactive silane functionality)

IT Fluoropolymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(polyether-, bis(triethoxysilane)-terminated; cure-on-demand,
moisture-curable compns. having reactive silane functionality)

IT Fluoropolymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(polyether-, silane functional group-contg.; cure-on-demand,
moisture-curable compns. having reactive silane functionality)

IT Fluoropolymers, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(polysiloxane-, silane functional group-contg.; cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT Polyesters, uses
Polyolefins
Polyphosphazenes
Polysiloxanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(silane functional group-contg.; cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT 82184-29-0 153660-59-4, Bis(dodecylphenyl)iodonium tetrakis(pentafluorophenyl)borate 213202-18-7 213202-19-8
213471-64-8 213471-66-0
RL: MOA (Modifier or additive use); USES (Uses)
(acid generating material; cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT 78-08-0DP, Vinyltriethoxysilane, reaction products with methylhydro-dimethylsiloxane 2768-02-7DP, Vinyltrimethoxysilane, reaction products with methylhydro-dimethylsiloxane 4130-08-9DP, Vinyltriacetoxysilane, reaction products with methylhydro-dimethylsiloxane 5507-44-8DP, Vinyldiethoxymethylsilane, reaction products with methylhydro-dimethylsiloxane 57813-67-9DP, 3-Butenyltriethoxysilane, reaction products with methylhydro-dimethylsiloxane 70364-11-3DP, Vinyldimethylethoxysilane, reaction products with methylhydro-dimethylsiloxane 156118-35-3DP, Dimethylsilanediol-methylsilanediol copolymer, reaction products with vinyltriethoxysilane
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT 998-30-1D, Triethoxysilane, reaction products with vinyl terminated polydimethylsiloxane 14814-09-6D, reaction products with vinyl terminated polydimethylsiloxane 31692-79-2, Hydroxy-terminated polydimethylsiloxane 31900-57-9D, Polydimethylsiloxane, hydroxyterminated, dimethylvinylsilyl-terminated, reaction products with hydrosilanes 59942-04-0D, Dimethylvinylsilyl-terminated polydimethylsiloxane, reaction products with hydrosilanes
RL: TEM (Technical or engineered material use); USES (Uses)
(cure-on-demand, moisture-curable compns. having reactive silane functionality)

IT 78-07-9, Ethyltriethoxysilane 78-10-4, Tetraethoxysilane 14814-09-6
16068-37-4, Bistriethoxysilylthane **18401-43-9** 18536-91-9,
Dodecyltriethoxysilane 52034-16-9 125607-98-9
RL: TEM (Technical or engineered material use); USES (Uses)
(reactive diluent; cure-on-demand, moisture-curable compns. having reactive silane functionality)

RE.CNT 88 THERE ARE 88 CITED REFERENCES AVAILABLE FOR THIS RECORD

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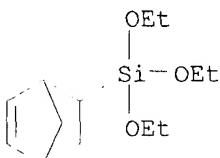
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IT 18401-43-9

RL: TEM (Technical or engineered material use); USES (Uses)
 (reactive diluent; cure-on-demand, moisture-curable compns. having
 reactive silane functionality)

RN 18401-43-9 HCPLUS

CN Silane, bicyclo[2.2.1]hept-5-en-2-yltriethoxy- (9CI) (CA INDEX NAME)



L35 ANSWER 7 OF 30 HCPLUS COPYRIGHT 2002 ACS
 AN 2000:316238 HCPLUS
 DN 133:74889
 TI Selective Electroless Copper Deposition within Block Copolymer Microdomains
 AU Boontongkong, Yot; Cohen, Robert E.; Rubner, Michael F.
 CS Center for Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA
 SO Chemistry of Materials (2000), 12(6), 1628-1633
 CODEN: CMATEX; ISSN: 0897-4756
 PB American Chemical Society
 DT Journal
 LA English
 CC 38-2 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42
 AB We demonstrate a method for the directed formation of layered metallic copper structure within the subsurface morphol. of a bulk lamellar block copolymer. Using an electroless deposition process, copper was selectively deposited inside the interconnected microdomain network of the water-permeable block contg. preloaded palladium ions. The relatively simple process yields a novel nanoscale composite consisting of alternating layers of metallic copper with those of the hydrocarbon block matrix. The extent of the copper deposition can be controlled by adjusting the deposition rate and deposition time.
 ST selective electroless copper deposition block copolymer microdomain
 IT Coating process
 (electroless; selective electroless copper deposition within block copolymer microdomains)

IT Polymer morphology
 (lamellar; selective electroless copper deposition within block copolymer microdomains)

IT Vapor deposition process
 (selective; selective electroless copper deposition within block copolymer microdomains)

IT 7440-05-3, Palladium, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (copolymer domains loaded with; selective electroless copper deposition within block copolymer microdomains)

IT 167285-62-3D, hydrolyzed
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (palladium-loaded; selective electroless copper deposition within block copolymer microdomains)

IT 7440-50-8, Copper, processes
 RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (selective electroless copper deposition within block copolymer microdomains)

RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD

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IT 167285-62-3D, hydrolyzed

RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (palladium-loaded; selective electroless copper deposition within block copolymer microdomains)

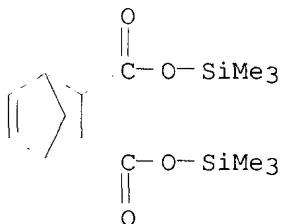
RN 167285-62-3 HCPLUS

CN Bicyclo[2.2.1]hept-5-ene-2,3-dicarboxylic acid, bis(trimethylsilyl) ester,
 polymer with 1,2,3,4,4a,5,8,8a-octahydro-2-methyl-1,4:5,8-
 dimethanonaphthalene, block (9CI) (CA INDEX NAME)

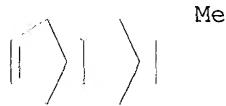
CM 1

CRN 56151-04-3

CMF C15 H26 O4 Si2



CM 2

CRN 21681-47-0
CMF C13 H18

L35 ANSWER 8 OF 30 HCAPLUS COPYRIGHT 2002 ACS
 AN 1997:731411 HCAPLUS
 DN 127:360049
 TI Transparent thermosetting silicone resin solution compositions with good coatability and resistance to heat and chemicals
 IN Taniguchi, Masaharu; Niwa, Katsuhiro; Goto, Tetsuya
 PA Toray Industries, Inc., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C08L083-06
 ICS C08G077-18; C08G077-26; G02B001-10; G02B005-20; G02F001-1333;
 C08F032-08
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 76
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09279034	A2	19971028	JP 1997-28070	19970212
PRAI	JP 1996-29537		19960216		

AB The compns. useful for protecting color filters of LCD devices, etc., contain nadic acid-based imidosiloxane precursors. Thus, mixing .gamma.-aminopropylmethyldiethoxysilane 191.5 in 2-methyl-3-methoxybutanol 414.7 and .gamma.-butyrolactone with nadic acid anhydride 164.0 g at 30.degree. for 2 h gave an imidosiloxane precursor which was spin-coated on a glass surface to thickness of 1 mm, dried at 100.degree. for 5 min and heated at 250.degree. for 30 mm gave a film with thickness 1.5 .mu.m and good surface evenness and resistance to heat and moisture.

ST protective coating imido siloxane LCD device; nadic acid polyimide siloxane coating; antiscratching nadimide siloxane coating; heat resistance nadimide siloxane coating; chem resistance nadimide siloxane coating

IT Coating materials
 Coating materials
 (chem.- and heat-resistant, nadic acid-based imide-siloxanes; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Polysiloxanes, uses
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (nadimide-contg. resins; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Polysiloxanes, uses
 Polysiloxanes, uses

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide-; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Silsesquioxanes
Silsesquioxanes
Silsesquioxanes
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polyimide-polysiloxane-, nadimide-contg. resins; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Polysiloxanes, uses
Polysiloxanes, uses
Polysiloxanes, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polyimide-silsesquioxane-, nadimide-contg. resins; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Polyimides, uses
Polyimides, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polysiloxane-; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Polyimides, uses
Polyimides, uses
Polyimides, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(polysiloxane-silsesquioxane-, nadimide-contg. resins; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Silsesquioxanes
Silsesquioxanes
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(siloxane-, nadimide-contg. resins; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Polysiloxanes, uses
Polysiloxanes, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(silsesquioxane-, nadimide-contg. resins; transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT Liquid crystal displays
(transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT 198423-16-4, .gamma.-Aminopropylmethyldiethoxysilane nadimide homopolymer 198423-17-5, .gamma.-Aminopropylmethyldiethoxysilane nadimide homopolymer, sru 198423-18-6, .gamma.-Aminopropylmethyldiethoxysilane nadimide-methyltrimethoxysilane-phenyltrimethoxysilane copolymer 198423-19-7
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

IT 198423-16-4, .gamma.-Aminopropylmethyldiethoxysilane nadimide homopolymer 198423-17-5, .gamma.-Aminopropylmethyldiethoxysilane nadimide homopolymer, sru 198423-18-6, .gamma.-Aminopropylmethyldiethoxysilane nadimide-methyltrimethoxysilane-phenyltrimethoxysilane copolymer
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (transparent thermosetting silicone resin soln. compns. with good coatability and resistance to heat and chems.)

RN 198423-16-4 HCPLUS

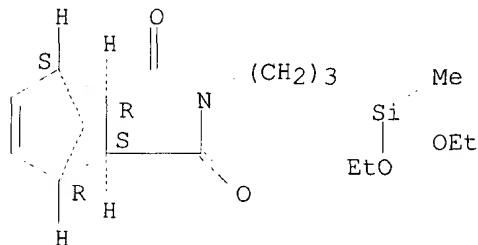
CN 4,7-Methano-1H-isoindole-1,3(2H)-dione, 2-[3-(diethoxymethylsilyl)propyl]-3a,4,7,7a-tetrahydro-, (3a.alpha.,4.alpha.,7.alpha.,7a.alpha.)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 198423-15-3

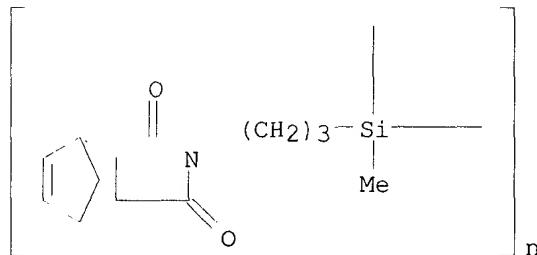
CMF C17 H27 N O4 Si

Relative stereochemistry.



RN 198423-17-5 HCPLUS

CN Poly[[3-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methano-2H-isoindol-2-yl)propyl]methylsilylene] (9CI) (CA INDEX NAME)



RN 198423-18-6 HCPLUS

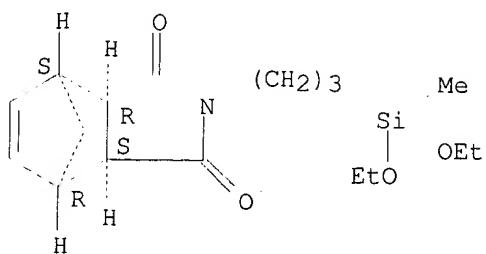
CN 4,7-Methano-1H-isoindole-1,3(2H)-dione, 2-[3-(diethoxymethylsilyl)propyl]-3a,4,7,7a-tetrahydro-, (3a.alpha.,4.alpha.,7.alpha.,7a.alpha.)-, polymer with trimethoxymethylsilane and trimethoxyphenylsilane (9CI) (CA INDEX NAME)

CM 1

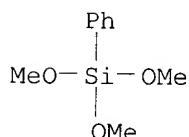
CRN 198423-15-3

CMF C17 H27 N O4 Si

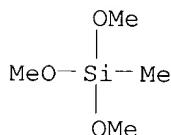
Relative stereochemistry.



CM 2

CRN 2996-92-1
CMF C9 H14 O3 Si

CM 3

CRN 1185-55-3
CMF C4 H12 O3 Si

L35 ANSWER 9 OF 30 HCPLUS COPYRIGHT 2002 ACS
 AN 1997:476282 HCPLUS
 DN 127:110414
 TI Addition polymers of polycycloolefins containing silyl functional groups
 IN McIntosh, Lester H., III; Goodall, Brian L.; Shick, Robert A.; Jayaraman, Saikumar
 PA B.F. Goodrich Company, USA
 SO PCT Int. Appl., 186 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C08F032-08
 ICS C09D145-00
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 35, 74
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI WO 9720871 A2 19970612 WO 1996-US17812 19961107
 WO 9720871 A3 19971023
 W: AL, AM, AU, AZ, BB, BG, BR, BY, CA, CN, CZ, EE, GE, HU, IS, JP,
 KE, KG, KR, KZ, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO,
 NZ, PL, RO, RU, SD, SG, SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN,
 AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
 RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
 IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
 MR, NE, SN, TD, TG
 US 5912313 A 19990615 US 1995-562345 19951122
 AU 9711170 A1 19970627 AU 1997-11170 19961107
 EP 862589 A2 19980909 EP 1996-941968 19961107
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI
 US 6031058 A 20000229 US 1999-263930 19990308
 PRAI US 1995-562345 19951122
 WO 1996-US17812 19961107
 AB Polymers have glass transition temp. \geq 250. degree. and contain polycyclic units such as norbornenes and pendant silyl functional groups represented by $-(\text{CHR9})_n\text{SiR10R11R12}$ and $-\text{A-SiR10R11R12}$, wherein A is a divalent radical, R9 = H, Me, or Et, R10, R11, and R12 independently represent halogen, linear or branched C1-C20 alkyl, linear or branched C1-C20 alkoxy, etc., n = 0-5. Thus, 1-hexene-norbornene-triethoxysilylnorbornene copolymer was prep'd. using a catalyst contg. H₂SbF₆, Ni ethylhexanoate, BF₃ etherate, and Et₃Al.
 ST polymn norbornene silylnorbornene catalyst; nickel catalyst norbornene polymn; aluminum catalyst norbornene polymn; coordination compd catalyst norbornene polymn; spin coating norbornene polymer metal
 IT Chain transfer agents
 (hexene; manuf. of addn. polymers of polycycloolefins contg. silyl functional groups and catalysts for)
 IT Naphthenic acids, uses
 RL: CAT (Catalyst use); USES (Uses)
 (iron salts; manuf. of addn. polymers of polycycloolefins contg. silyl functional groups and catalysts for)
 IT Gel permeation chromatography
 Molecular weight
 Molecular weight distribution
 NMR (nuclear magnetic resonance)
 Stress-strain relationship
 Stress-strain relationship
 (manuf. of addn. polymers of polycycloolefins contg. silyl functional groups and)
 IT Polymerization catalysts
 (manuf. of addn. polymers of polycycloolefins contg. silyl functional groups and catalysts for)
 IT Bronsted acids
 Coordination compounds
 Electron donors
 Group VIII element compounds
 Halides
 Lewis acids
 Metallocenes
 Organometallic compounds
 RL: CAT (Catalyst use); USES (Uses)
 (manuf. of addn. polymers of polycycloolefins contg. silyl functional groups and catalysts for)
 IT Cycloalkenes
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (manuf. of addn. polymers of polycycloolefins contg. silyl functional

groups and catalysts for)

IT Photolithography
(manuf. of addn. polymers of polycycloolefins contg. silyl functional groups for)

IT Testing of materials
(mech.; manuf. of addn. polymers of polycycloolefins contg. silyl functional groups and)

IT Carboxylic acids, uses
RL: CAT (Catalyst use); USES (Uses)
(nickel salts; manuf. of addn. polymers of polycycloolefins contg. silyl functional groups and catalysts for)

IT Adhesion, physical
(norbornene polymers as coatings on silica and metals)

IT Coating process
(spin; norbornene polymers as coatings on silica and metals)

IT 71-48-7, Cobaltous acetate 76-05-1, Trifluoroacetic acid, uses
96-10-6, Diethylaluminum chloride, uses 97-93-8, Triethylaluminum, uses
102-54-5, Ferrocene 109-63-7, Boron trifluoride etherate 150-46-9,
Triethoxyboron 373-02-4, Nickel (II) acetate 428-76-2,
Bis(trifluoromethylsulfonyl) methane 557-20-0, Diethylzinc 563-43-9,
Ethylaluminum dichloride, uses 932-69-4, Cobalt benzoate 1002-88-6,
Cobaltous stearate 1109-15-5, Tris(pentafluorophenyl)boron 1271-28-9,
Nickelocene 1313-99-1, Nickel oxide, uses 1314-08-5, Palladium (II)
oxide 1493-13-6, Trifluoromethanesulfonic acid 3094-87-9, Ferrous
acetate 3264-82-2, Nickel acetylacetone 4454-16-4, Nickel (II)
ethylhexanoate 7550-45-0, Titanium tetrachloride, uses 7580-31-6,
Nickel ethylhexanoate 7646-79-9, Cobalt chloride, uses 7647-10-1,
Palladium (II) chloride 7705-08-0, Ferric chloride, uses 7718-54-9,
Nickel chloride, uses 7758-94-3, Ferrous chloride 7783-70-2, Antimony
pentafluoride 7789-43-7, Cobalt bromide 7789-46-0, Ferrous bromide
7790-38-7, Palladium (II) iodide 10031-26-2, Ferric bromide
10049-07-7, Rhodium chloride 10049-08-8, Ruthenium trichloride
10294-34-5, Boron trichloride 12077-85-9, Bis(allyl)nickel 12386-08-2
13444-94-5, Palladium (II) bromide 13462-88-9, Nickel bromide
13478-93-8 13965-03-2, Dichlorobis(triphenylphosphine)palladium (II)
14024-18-1, Ferric acetylacetone 14024-48-7, Cobaltous acetylacetone
14024-61-4, Palladium acetylacetone 14220-64-5,
Dichlorobis(benzonitrile)palladium (II) 14264-16-5,
Bis(triphenylphosphine)nickel dichloride 14324-83-5, Nickel (II)
trifluoroacetylacetone 14588-08-0, Bis(triphenylphosphine) palladium
diacetate 14592-56-4, Dichlorobis(acetonitrile)palladium (II)
14647-23-5 14708-14-6, Nickel tetrafluoroborate 14949-69-0, Nickel
(II) hexafluoroacetylacetone 15529-49-4 15709-81-6 16940-81-1,
Hexafluorophosphoric acid 16950-06-4, Hexafluoroantimonic acid
21679-46-9, Cobaltic acetylacetone 21797-13-7 23854-38-8
26042-64-8, Silver hexafluoroantimonate 26490-63-1 27253-31-2, Cobalt
neodecanoate 28966-81-6, trans-Palladium dichloride
bis(triphenylphosphine) 30066-40-1 41290-68-0 42196-31-6, Palladium
bis(trifluoroacetate) 55102-19-7 59836-85-0, Nickel lactate
67816-11-9, Palladium 2-ethylhexanoate 78736-29-5 118612-00-3
123129-23-7 141219-72-9, Palladium ethylhexanoate 185972-11-6
186007-29-4
RL: CAT (Catalyst use); USES (Uses)
(manuf. of addn. polymers of polycycloolefins contg. silyl functional
groups and catalysts for)

IT 12012-95-2DP, Allyl palladium chloride, reaction products with silver
hexafluoroantimonate 12145-58-3P 14481-08-4P 16950-06-4DP,
Hexafluoroantimonic acid, reaction products with cobalt ethylhexanoate
26042-64-8DP, Silver hexafluoroantimonate, reaction products with allyl
palladium chloride 39817-06-6DP, reaction products with

hexafluoroantimonic acid 66674-76-8P 171044-89-6P
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation);
 USES (Uses)
 (manuf. of addn. polymers of polycycloolefins contg. silyl functional
 groups and catalysts for)

IT 498-66-8DP, Bicyclo[2.2.1]hept-2-ene, polymers with triethoxysilane-
 functionalized polybutadiene and triethoxysilylnorbornene 26160-98-5DP,
 1,2-Polybutadiene, triethoxysilane-functionalized, polymers with
 norbornene and triethoxysilylnorbornene 192142-99-7DP, polymers
 with triethoxysilane-functionalized polybutadiene and norbornene
 192143-00-3P, 1-Hexene-norbornene-triethoxysilylnorbornene
 copolymer 192143-01-4P 192143-03-6P
 192143-04-7P 192143-05-8P 192143-06-9P
 192143-07-0P 192143-08-1P 192143-10-5P
 192231-09-7P 192231-10-0P 192231-11-1P
 192231-12-2P 192231-13-3P 192231-14-4P
 192231-15-5P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (manuf. of addn. polymers of polycycloolefins contg. silyl functional
 groups and catalysts for)

IT 7429-90-5, Aluminum, miscellaneous 7440-22-4, Silver, miscellaneous
 7440-50-8, Copper, miscellaneous 7440-57-5, Gold, miscellaneous
 7631-86-9, Silica, miscellaneous
 RL: MSC (Miscellaneous)
 (norbornene polymers as coatings on silica and metals)

IT 111-78-4, 1,5-Cyclooctadiene 60969-19-9, Thallium hexafluorophosphate
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of cyclooctadiene with crotylpalladium halide dimer and
 thallium hexafluorophosphate)

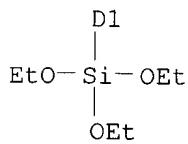
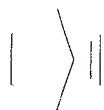
IT 4784-77-4, Crotyl bromide
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of palladium dichloride with crotyl bromide)

IT 603-35-0, Triphenylphosphine, reactions 859-65-4,
 Triphenylphosphinebenzoylmethylene 1295-35-8, Nickel
 bis(cycloocatadiene)
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of triphenylphosphine with triphenylphosphinebenzoylmethylene
 and nickel di(cycloocatadiene))

IT 106-99-0, 1,3-Butadiene, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction with bis(cyclooctadiene)nickel and crotyl bromide)

IT 192142-99-7DP, polymers with triethoxysilane-functionalized
 polybutadiene and norbornene 192143-00-3P, 1-Hexene-norbornene-
 triethoxysilylnorbornene copolymer 192143-01-4P
 192143-03-6P 192143-04-7P 192143-05-8P
 192143-06-9P 192143-07-0P 192143-08-1P
 192143-10-5P 192231-09-7P 192231-10-0P
 192231-11-1P 192231-12-2P 192231-13-3P
 192231-14-4P 192231-15-5P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (manuf. of addn. polymers of polycycloolefins contg. silyl functional
 groups and catalysts for)

RN 192142-99-7 HCAPLUS
 CN Silane, bicyclo[2.2.1]heptenyltriethoxy- (9CI) (CA INDEX NAME)



RN 192143-00-3 HCAPLUS

CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and 1-hexene (9CI) (CA INDEX NAME)

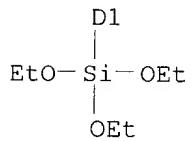
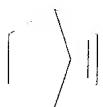
CM 1

CRN 192142-99-7

CMF C13 H24 O3 Si

CCI IDS

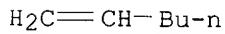
CDES 8:ID



CM 2

CRN 592-41-6

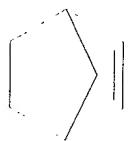
CMF C6 H12



CM 3

CRN 498-66-8

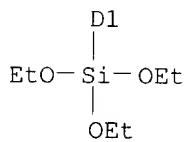
CMF C7 H10



RN 192143-01-4 HCAPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

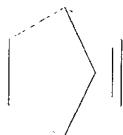
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



CM 2

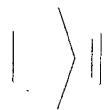
CRN 498-66-8
CMF C7 H10



RN 192143-03-6 HCAPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene, decylbicyclo[2.2.1]hept-2-ene and
5-ethylidenebicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

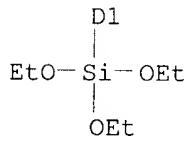
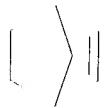
CRN 192143-02-5
CMF C17 H30
CCI IDS
CDES 8:ID



Me- (CH₂)₉-D1

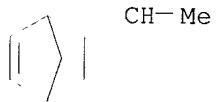
CM 2

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



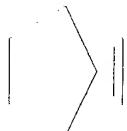
CM 3

CRN 16219-75-3
CMF C9 H12



CM 4

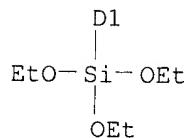
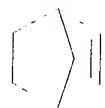
CRN 498-66-8
CMF C7 H10



RN 192143-04-7 HCAPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and 5-ethylidenebicyclo[2.2.1]hept-2-ene (9CI)
(CA INDEX NAME)

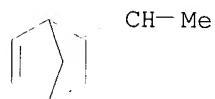
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



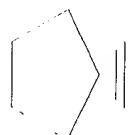
CM 2

CRN 16219-75-3
CMF C9 H12



CM 3

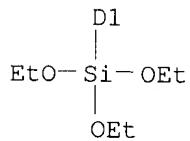
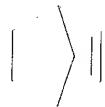
CRN 498-66-8
CMF C7 H10



RN 192143-05-8 HCAPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and ethenylbicyclo[2.2.1]hept-2-ene (9CI) (CA
INDEX NAME)

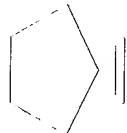
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



CM 2

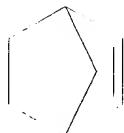
CRN 40356-67-0
CMF C9 H12
CCI IDS
CDES 8:ID



D1-CH=CH₂

CM 3

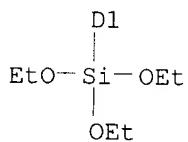
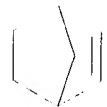
CRN 498-66-8
CMF C7 H10



RN 192143-06-9 HCAPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and 1,3-butadiene (9CI) (CA INDEX NAME)

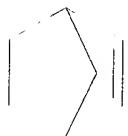
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



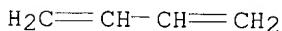
CM 2

CRN 498-66-8
CMF C7 H10



CM 3

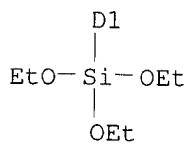
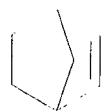
CRN 106-99-0
CMF C4 H6



RN 192143-07-0 HCPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and 2-methyl-1-propene (9CI) (CA INDEX NAME)

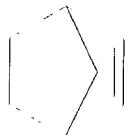
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



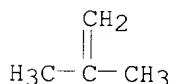
CM 2

CRN 498-66-8
CMF C7 H10



CM 3

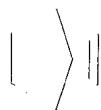
CRN 115-11-7
CMF C4 H8



RN 192143-08-1 HCPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltrimethyl-, polymer with decylbicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

CM 1

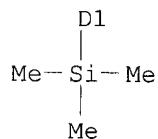
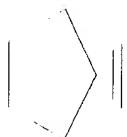
CRN 192143-02-5
CMF C17 H30
CCI IDS
CDES 8:ID



Me—(CH₂)₉—D1

CM 2

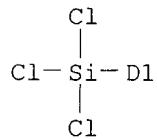
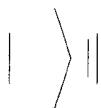
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CMF C10 H18 Si
CCI IDS
CDES 8:ID



RN 192143-10-5 HCPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltrichloro-, polymer with
bicyclo[2.2.1]hept-2-ene (9CI) (CA INDEX NAME)

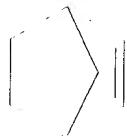
CM 1

CRN 192143-09-2
CMF C7 H9 Cl3 Si
CCI IDS
CDES 8:ID



CM 2

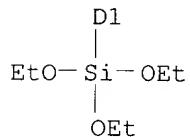
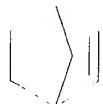
CRN 498-66-8
CMF C7 H10



RN 192231-09-7 HCAPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and 5-decylbicyclo[2.2.1]hept-2-ene (9CI) (CA
INDEX NAME)

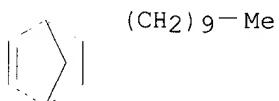
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



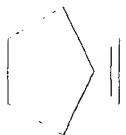
CM 2

CRN 22094-85-5
CMF C17 H30



CM 3

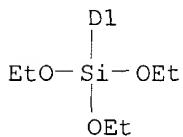
CRN 498-66-8
CMF C7 H10



RN 192231-10-0 HCAPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltrienethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and 2-methyl-1-propene trimer (9CI) (CA INDEX
NAME)

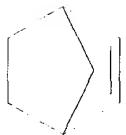
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



CM 2

CRN 498-66-8
CMF C7 H10



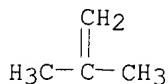
CM 3

CRN 7756-94-7
CMF (C4 H8)3
CCI PMS

CM 4

CRN 115-11-7

CMF C4 H8



RN 192231-11-1 HCPLUS

CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and 4-ethenylcyclohexene monoepoxide (9CI) (CA
INDEX NAME)

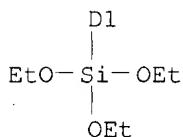
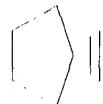
CM 1

CRN 192142-99-7

CMF C13 H24 O3 Si

CCI IDS

CDES 8:ID



CM 2

CRN 11094-48-7

CMF C8 H12 O

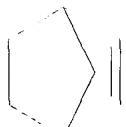
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 498-66-8

CMF C7 H10

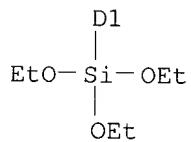
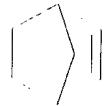


RN 192231-12-2 HCPLUS

CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and ethoxyethene (9CI) (CA INDEX NAME)

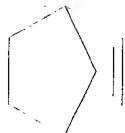
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



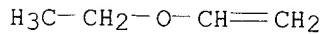
CM 2

CRN 498-66-8
CMF C7 H10



CM 3

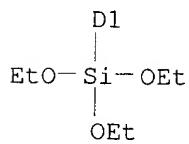
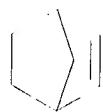
CRN 109-92-2
CMF C4 H8 O



RN 192231-13-3 HCAPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and 1-(ethenyloxy)butane (9CI) (CA INDEX NAME)

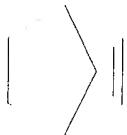
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



CM 2

CRN 498-66-8
CMF C7 H10



CM 3

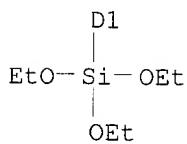
CRN 111-34-2
CMF C6 H12 O

n-BuO—CH=CH₂

RN 192231-14-4 HCPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and ethene (9CI) (CA INDEX NAME)

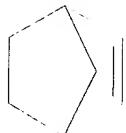
CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



CM 2

CRN 498-66-8
CMF C7 H10



CM 3

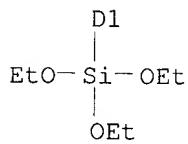
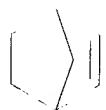
CRN 74-85-1
CMF C2 H4



RN 192231-15-5 HCPLUS
CN Silane, bicyclo[2.2.1]hept-2-enyltriethoxy-, polymer with
bicyclo[2.2.1]hept-2-ene and PS 078.5 (9CI) (CA INDEX NAME)

CM 1

CRN 192142-99-7
CMF C13 H24 O3 Si
CCI IDS
CDES 8:ID



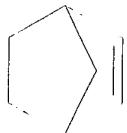
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CRN 109740-69-4
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 498-66-8
CMF C7 H10



L35 ANSWER 10 OF 30 HCAPLUS COPYRIGHT 2002 ACS
AN 1997:181095 HCAPLUS
DN 126:186572
TI Unsaturated bicyclic silanes and their manufacture and polycondensation by
addition reaction and(or) hydrolysis
IN Wolter, Herbert; Storch, Werner
PA Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V.,
Germany
SO Ger. Offen., 42 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C07F007-08
ICS C07F007-10; C07F007-18; C07F009-655; C08L083-04; C09J183-04;
C08G077-20; C08G077-26; C08G077-28; C08G077-14; C08G079-00;
C08G061-12
ICA C09K003-14
CC 35-6 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 29, 37, 38, 40, 42
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 19627198	A1	19970109	DE 1996-19627198	19960705
	DE 19627198	C2	19971120		
	DE 19627220	A1	19970109	DE 1996-19627220	19960705
	DE 19627220	C2	19971120		
	WO 9702272	A1	19970123	WO 1996-DE1216	19960705
	W: US				
	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
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	RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 779890	A1	19970625	EP 1996-922748	19960705
	EP 779890	B1	20011017		
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	EP 781290	A1	19970702	EP 1996-922747	19960705
	R: AT, BE, CH, DE, DK, FR, GB, IT, LI, LU, NL, SE				
	AT 207074	E	20011115	AT 1996-922748	19960705
	US 5792881	A	19980811	US 1997-793270	19970305
PRAI	DE 1995-19524657	A1	19950706		
	WO 1996-DE1216	W	19960705		
	WO 1996-DE1217	W	19960705		

GI



AB Title compds. such as urethane I are manufd. and are useful for prodn. of moldings, fibers, coatings, adhesives, and sealants. Thus, reaction of 2-(hydroxymethyl)-5-norbornene with OCN(CH₂)₃Si(OEt)₃ gave I, which was hydrolytically polymd. to give soln. that was cured as a coating using a thiol as crosslinker.

ST unsatd bicyclic silane polymerizable manuf; sealant unsatd bicyclic silane polymer; adhesive unsatd bicyclic silane polymer; coating unsatd bicyclic silane polymer; fiber unsatd bicyclic silane polymer; molding unsatd bicyclic silane polymer; norbornenylmethyl ethoxysilylpropylcarbamate polymerizable manuf

IT Polysiloxanes, preparation

RL: IMF (Industrial manufacture); PREP (Preparation)
 (unsatd. bicyclic silanes and their manuf. and polycondensation by addn. reaction and(or) hydrolysis)

IT Adhesives

Coating materials

Lenses

Polishing materials

Sealing compositions

(uses of polymers; unsatd. bicyclic silanes and their manuf. and polycondensation by addn. reaction and(or) hydrolysis)

IT Synthetic polymeric fibers, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process)
 (uses of polymers; unsatd. bicyclic silanes and their manuf. and polycondensation by addn. reaction and(or) hydrolysis)

IT 187161-64-4P 187161-65-5P

RL: IMF (Industrial manufacture); PREP (Preparation)
 (molding; unsatd. bicyclic silanes and their manuf. and

polycondensation by addn. reaction and(or) hydrolysis)

IT 187161-73-5P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (moldings; unsatd. bicyclic silanes and their manuf. and
 polycondensation by addn. reaction and(or) hydrolysis)

IT 66063-68-1P 187161-69-9P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (precursor; unsatd. bicyclic silanes and their manuf. and
 polycondensation by addn. reaction and(or) hydrolysis)

IT 95-12-5, 2-Hydroxymethyl-5-norbornene 542-92-7, 1,3-Cyclopentadiene,
 reactions 1830-78-0, Glycerol 1,3-dimethacrylate 13080-90-5,
 5-Norbornen-2-ol 15625-89-5, Trimethylolpropane triacrylate
 24801-88-5, 3-Isocyanatopropyltriethoxysilane 31001-77-1,
 3-Mercaptopropylmethyldimethoxysilane
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (precursor; unsatd. bicyclic silanes and their manuf. and
 polycondensation by addn. reaction and(or) hydrolysis)

IT 187161-61-1P 187161-63-3P 187161-68-8P
 187161-72-4P 187161-74-6P 187161-76-8P
 187161-77-9P 187161-78-0P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (thiol-cured coatings and moldings; unsatd. bicyclic silanes and their
 manuf. and polycondensation by addn. reaction and(or) hydrolysis)

IT 187161-60-0P 187161-67-7P 187161-71-3P
 187250-54-0P 187250-55-1P 187250-56-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (thiol-cured coatings; unsatd. bicyclic silanes and their manuf. and
 polycondensation by addn. reaction and(or) hydrolysis)

IT 181628-19-3P 187161-66-6P 187161-70-2P
 187161-75-7P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
 (Reactant or reagent)
 (unsatd. bicyclic silanes and their manuf. and polycondensation by
 addn. reaction and(or) hydrolysis)

IT 187161-64-4P 187161-65-5P
 RL: IMF (Industrial manufacture); PREP (Preparation)
 (molding; unsatd. bicyclic silanes and their manuf. and
 polycondensation by addn. reaction and(or) hydrolysis)

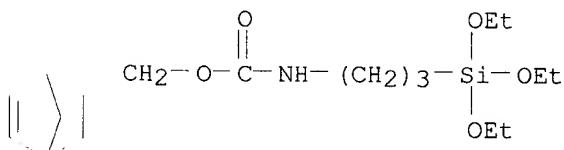
RN 187161-64-4 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,12-dodecanediyl ester, polymer with
 bicyclo[2.2.1]hept-5-en-2-ylmethyl [3-(triethoxysilyl)propyl]carbamate,
 ethenyldiethoxymethylsilane and 1,9-nananedithiol (9CI) (CA INDEX NAME)

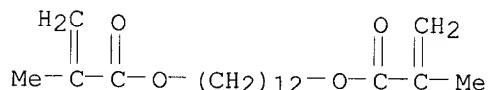
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CRN 181628-19-3

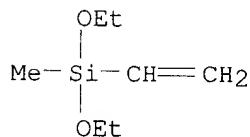
CMF C18 H33 N O5 Si



CM 2

CRN 72829-09-5
CMF C20 H34 O4

CM 3

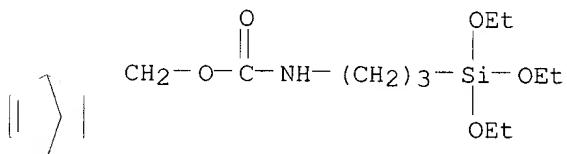
CRN 5507-44-8
CMF C7 H16 O2 Si

CM 4

CRN 3489-28-9
CMF C9 H20 S2HS- (CH₂)₉-SH

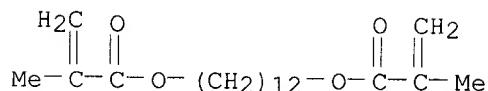
RN 187161-65-5 HCPLUS
 CN 2-Propenoic acid, 2-methyl-, 1,12-dodecanediyl ester, polymer with
 bicyclo[2.2.1]hept-5-en-2-ylmethyl [3-(triethoxysilyl)propyl]carbamate,
 2,2-bis[(3-mercaptopropanoate)methyl]-1,3-propanediyl
 bis(3-mercaptopropanoate) and ethenyldiethoxymethylsilane (9CI) (CA INDEX
 NAME)

CM 1

CRN 181628-19-3
CMF C18 H33 N O5 Si

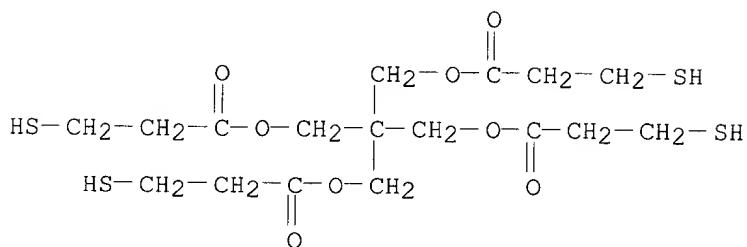
CM 2

CRN 72829-09-5
 CMF C20 H34 O4



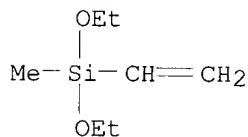
CM 3

CRN 7575-23-7
 CMF C17 H28 O8 S4



CM 4

CRN 5507-44-8
 CMF C7 H16 O2 Si



IT 187161-73-5P

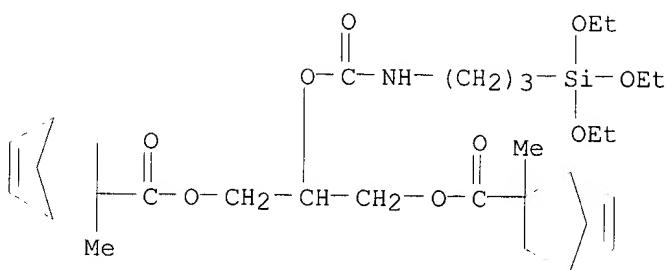
RL: IMF (Industrial manufacture); PREP (Preparation)
 (moldings; unsatd. bicyclic silanes and their manuf. and
 polycondensation by addn. reaction and(or) hydrolysis)

RN 187161-73-5 HCPLUS

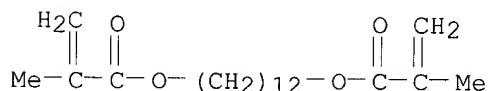
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-methyl-,
 2-[[[3-(triethoxysilyl)propyl]amino]carbonyloxy]-1,3-propanediyl ester,
 polymer with 2,2-bis[(3-mercaptopropanoate)methyl]-1,3-propanediyl
 bis(3-mercaptopropanoate) and 1,12-dodecanediyl bis(2-methyl-2-propenoate)
 (9CI) (CA INDEX NAME)

CM 1

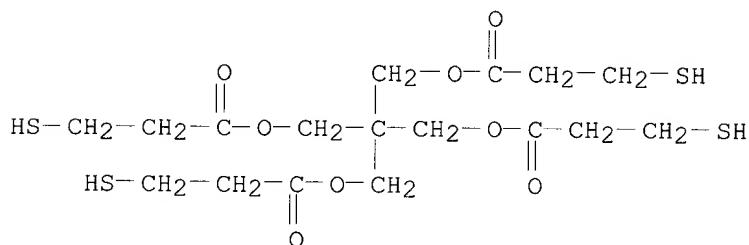
CRN 187161-70-2
 CMF C31 H49 N O9 Si



CM 2

CRN 72829-09-5
CMF C20 H34 O4

CM 3

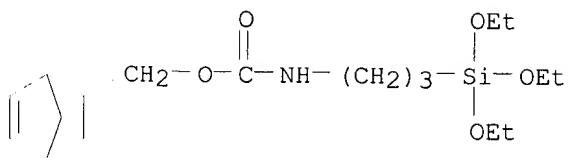
CRN 7575-23-7
CMF C17 H28 O8 S4IT 187161-61-1P 187161-63-3P 187161-68-8P
187161-72-4P 187161-74-6P 187161-76-8P
187161-77-9P 187161-78-0PRL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thiol-cured coatings and moldings; unsatd. bicyclic silanes and their manuf. and polycondensation by addn. reaction and(or) hydrolysis)

RN 187161-61-1 HCAPLUS

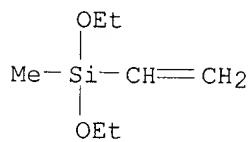
CN Carbamic acid, [3-(triethoxysilyl)propyl]-, bicyclo[2.2.1]hept-5-en-2-ylmethyl ester, polymer with ethenylidethoxymethylsilane (9CI) (CA INDEX NAME)

CM 1

CRN 181628-19-3
CMF C18 H33 N O5 Si

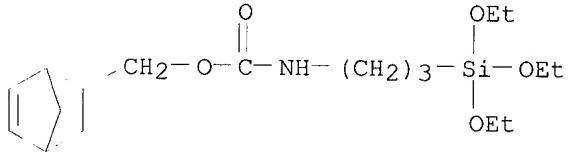


CM 2

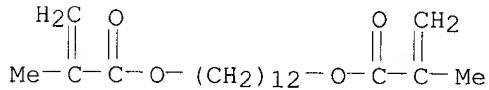
CRN 5507-44-8
CMF C7 H16 O2 Si

RN 187161-63-3 HCPLUS
 CN 2-Propenoic acid, 2-methyl-, 1,12-dodecanediyl ester, polymer with
 bicyclo[2.2.1]hept-5-en-2-ylmethyl [3-(triethoxysilyl)propyl]carbamate and
 ethenyl diethoxymethylsilane (9CI) (CA INDEX NAME)

CM 1

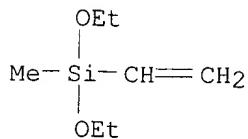
CRN 181628-19-3
CMF C18 H33 N O5 Si

CM 2

CRN 72829-09-5
CMF C20 H34 O4

CM 3

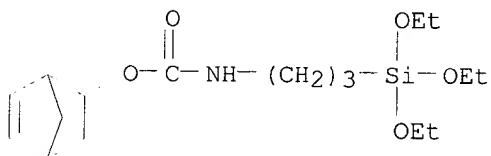
CRN 5507-44-8
CMF C7 H16 O2 Si



RN 187161-68-8 HCAPLUS
CN Carbamic acid, [3-(triethoxysilyl)propyl]-, bicyclo[2.2.1]hept-5-en-2-yl ester, 3,6,9,12-tetraoxatetradeca-1,13-diene, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 187161-66-6
CMF C17 H31 N 05 Si



CM 2

CRN 765-12-8
CMF C10 H18 04

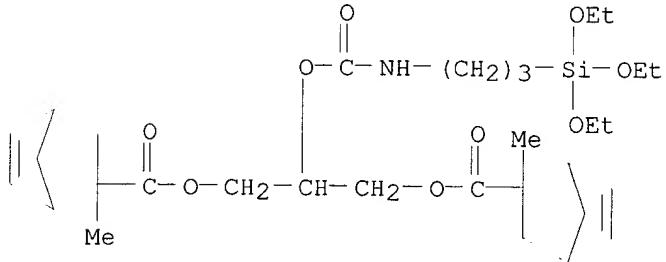


RN 187161-72-4 HCAPLUS

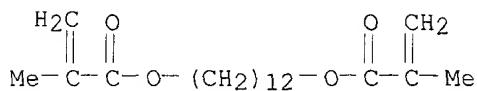
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-methyl-,
2-[[[3-(triethoxysilyl)propyl]amino]carbonyl]oxy]-1,3-propanediyl ester,
polymer with 1,12-dodecanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX
NAME)

CM 1

CRN 187161-70-2
CMF C31 H49 N O9 Si

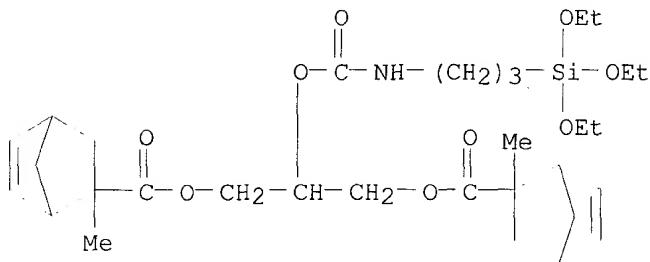


CM 2

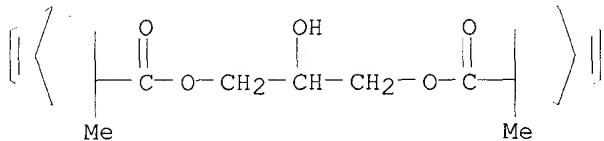
CRN 72829-09-5
CMF C20 H34 O4

RN 187161-74-6 HCPLUS
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-methyl-,
 2-hydroxy-1,3-propanediyl ester, polymer with 2-[[[[3-
 (triethoxysilyl)propyl]amino]carbonyl]oxy]-1,3-propanediyl
 bis(2-methylbicyclo[2.2.1]hept-5-ene-2-carboxylate) (9CI) (CA INDEX NAME)

CM 1

CRN 187161-70-2
CMF C31 H49 N O9 Si

CM 2

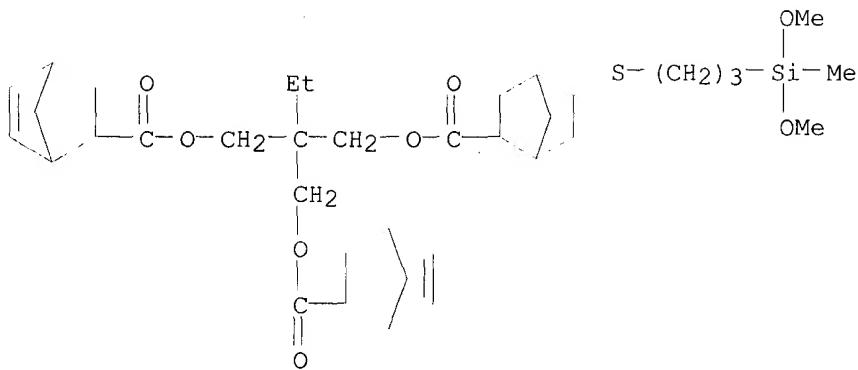
CRN 187161-69-9
CMF C21 H28 O5

RN 187161-76-8 HCPLUS
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-[[[[5-[[3-
 (dimethoxymethylsilyl)propyl]thio]bicyclo[2.2.1]hept-2-
 yl]carbonyl]oxy]methyl]-2-ethyl-1,3-propanediyl ester, homopolymer (9CI)
 (CA INDEX NAME)

CM 1

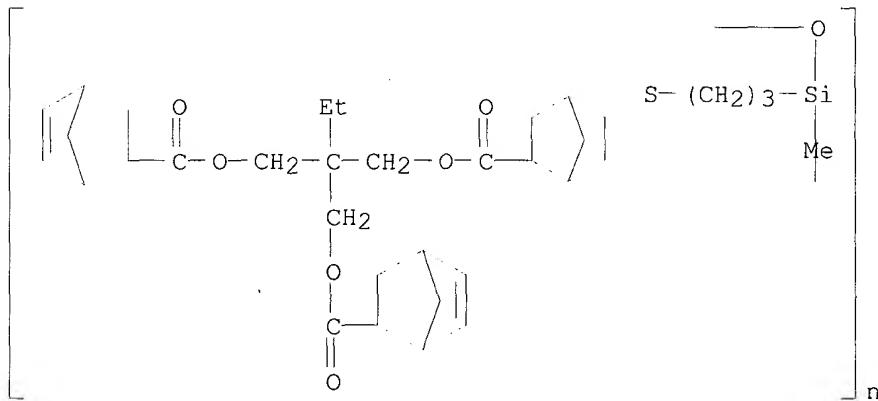
CRN 187161-75-7

CMF C36 H54 O8 S Si



RN 187161-77-9 HCPLUS

CN Poly[oxy[[3-[[5-[[2,2-bis[[bicyclo[2.2.1]hept-5-en-2-yl]carbonyl]oxy]methyl]butoxy]carbonyl]bicyclo[2.2.1]hept-2-yl]thio]propyl]methylsilylene]] (9CI) (CA INDEX NAME)



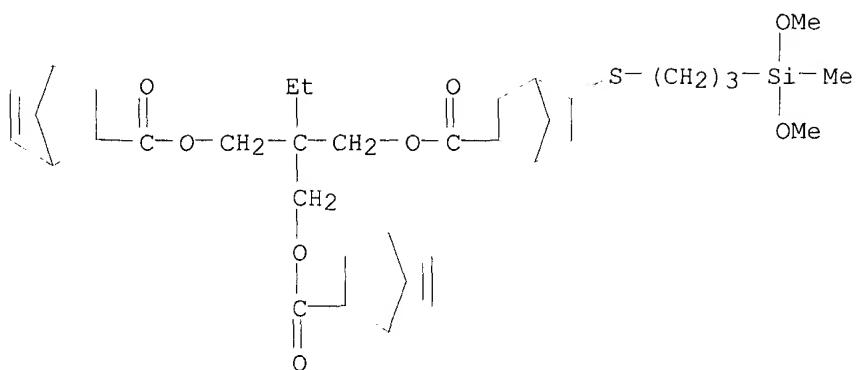
RN 187161-78-0 HCPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-[[[[5-[[3-(dimethoxymethylsilyl)propyl]thio]bicyclo[2.2.1]hept-2-yl]carbonyl]oxy]methyl]-2-ethyl-1,3-propanediyl ester, polymer with 1,12-dodecanediyl bis(2-methyl-2-propenoate) (9CI) (CA INDEX NAME)

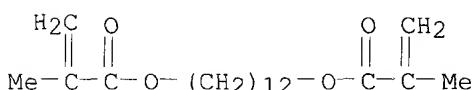
CM 1

CRN 187161-75-7

CMF C36 H54 O8 S Si



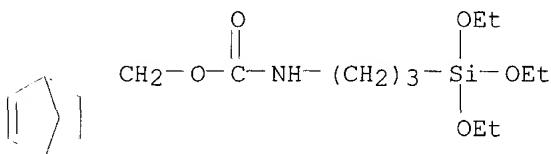
CM 2

CRN 72829-09-5
CMF C20 H34 O4IT 187161-60-0P 187161-67-7P 187161-71-3P
187250-54-0P 187250-55-1P 187250-56-2PRL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thiol-cured coatings; unsatd. bicyclic silanes and their manuf. and polycondensation by addn. reaction and(or) hydrolysis)

RN 187161-60-0 HCPLUS

CN Carbamic acid, [3-(triethoxysilyl)propyl]-, bicyclo[2.2.1]hept-5-en-2-ylmethyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

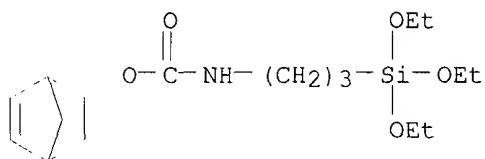
CRN 181628-19-3
CMF C18 H33 N O5 Si

RN 187161-67-7 HCPLUS

CN Carbamic acid, [3-(triethoxysilyl)propyl]-, bicyclo[2.2.1]hept-5-en-2-yl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 187161-66-6
CMF C17 H31 N O5 Si



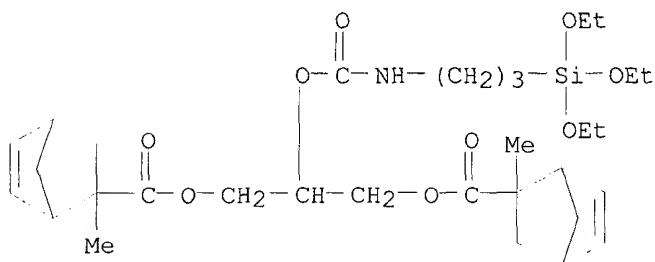
RN 187161-71-3 HCPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-methyl-, 2-[[[3-(triethoxysilyl)propyl]amino]carbonyloxy]-1,3-propanediyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

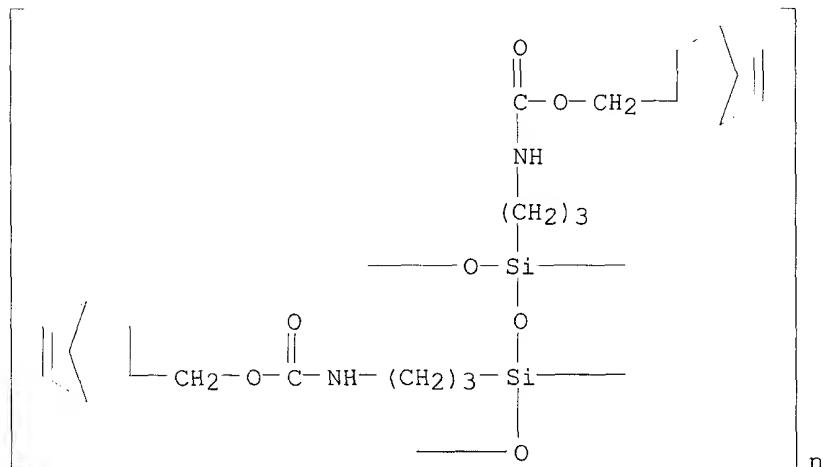
CRN 187161-70-2

CMF C31 H49 N O9 Si



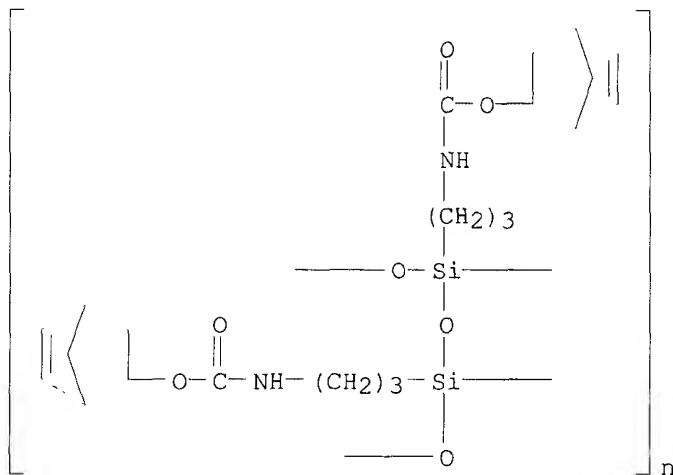
RN 187250-54-0 HCPLUS

CN Poly[[1,3-bis[3-[(bicyclo[2.2.1]hept-5-en-2-ylmethoxy)carbonyl]amino]propyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



RN 187250-55-1 HCPLUS

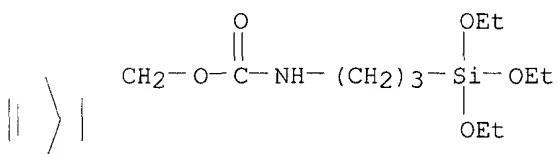
CN Poly[[1,3-bis[3-[(bicyclo[2.2.1]hept-5-en-2-yl)carbonyl]amino]propyl]-1,3:1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)



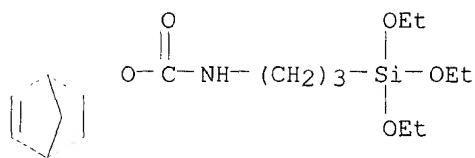
RN 187250-56-2 HCAPLUS
 CN Poly[1,3-bis[3-[[1-[[1-[(2-methylbicyclo[2.2.1]hept-5-en-2-yl)carbonyl]oxy]methyl]-2-[(2-methylbicyclo[2.2.1]hept-5-en-2-yl)carbonyl]oxy]ethoxy]carbonyl]amino]propyl]-1,3-disiloxanediylidene]-1,3-bis(oxy)] (9CI) (CA INDEX NAME)

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

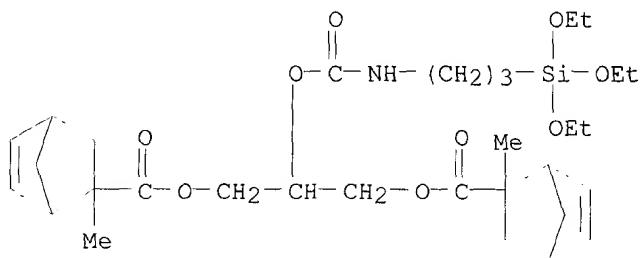
* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *
 IT 181628-19-3P 187161-66-6P 187161-70-2P
 187161-75-7P
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (unsatd. bicyclic silanes and their manuf. and polycondensation by
 addn. reaction and(or) hydrolysis)
 RN 181628-19-3 HCAPLUS
 CN Carbamic acid, [3-(triethoxysilyl)propyl]-, bicyclo[2.2.1]hept-5-en-2-ylmethyl ester (9CI) (CA INDEX NAME)



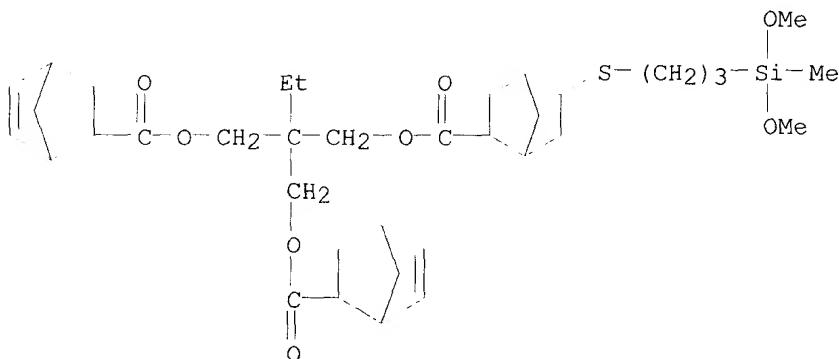
RN 187161-66-6 HCAPLUS
 CN Carbamic acid, [3-(triethoxysilyl)propyl]-, bicyclo[2.2.1]hept-5-en-2-yl ester (9CI) (CA INDEX NAME)



RN 187161-70-2 HCAPLUS
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-methyl-,
 2-[[[3-(triethoxysilyl)propyl]amino]carbonyloxy]-1,3-propanediyl ester
 (9CI) (CA INDEX NAME)



RN 187161-75-7 HCAPLUS
 CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 2-[[[5-[[3-
 (dimethoxymethylsilyl)propyl]thio]bicyclo[2.2.1]hept-2-
 yl]carbonyloxy]methyl]-2-ethyl-1,3-propanediyl ester (9CI) (CA INDEX
 NAME)



L35 ANSWER 11 OF 30 HCAPLUS COPYRIGHT 2002 ACS
 AN 1996:761899 HCAPLUS
 DN 126:33059
 TI Hydrolyzable organometallic and organometalloid compounds for chemical
 sealing of heating, ventilation, and air conditioning systems.
 IN Peterson, William R.; Berman, Renee E.; Giaccio, David
 PA Silicon Resources, Inc., USA
 SO PCT Int. Appl., 61 pp.
 CODEN: PIXXD2
 DT Patent
 LA English

IC ICM C09K003-12
 CC 42-1 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 29, 48

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9634067	A1	19961031	WO 1996-US2762	19960301
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML				
	AU 9651778	A1	19961118	AU 1996-51778	19960301
	JP 11504358	T2	19990420	JP 1996-532493	19960301
	US 5882543	A	19990316	US 1997-852265	19970506
PRAI	US 1995-429210		19950424		
	WO 1996-US2762		19960301		
OS	MARPAT 126:33059				
AB	Methods and compns. for dehydrating, passivating, and coating HVAC [heating-ventilation-air conditioning] and refrigeration systems having fluid enclosures include adding a compn. including organometalloid and/or organometallic compds. to the system, allowing the compns. to react with water in the system and sealing the system. The organometallic or organometalloid compds. include at least one compd. of general structure (R) _n (R1) _m (R2) _p M-O(CX=CY) _a Z [M = Sn, Pb, Ti, Zr, Hf, V, Al, Cr, Mn, Fe, Co, Zn, Si, Ge, B, As, Sb, and Te; R = C1-18-alkyl, C3-8-cycloalkyl or cycloalkene, C1-12-fluoroalkyl, C3-8-fluorocycloalkyl or fluorocycloalkene, C2-18-alkene, alkylphenyl, or an enoxy, carboxy, and/or alkoxy group; R1 = R, OR, O2CR, or O-(CX=CY)aZ; X = H, C1-18-alkyl or fluoroalkyl, PhO, PhCH2O, or R; Y is chosen from X (excluding H); Z is chosen from H or from a hydrolyzable ester or ether alkyl, fluoralkyl, carbonyl-substituted alkyl, alkyl esters, carboxyphenyl esters, and alkylbenzoyl groups; a = 0-2; m = 0-4; and n = 0-1]. The sealing organometallic compds. have at least one enoxy, carboxy and/or alkoxy group and/or organometalloid compds. which include at least three hydrolyzable groups, at least one of which is an enoxy group. When added to the system (after chem. dehydration), the sealing compns. exit an opening, react with atm. moisture and an external surface of the system, and seal the opening.				
ST	dehydration sealing system HVAC; heating system dehydration sealing; ventilation system dehydration sealing; air conditioning dehydration sealing; hydrolysis organometallic sealing system				
IT	Air conditioning (dehumidification, systems; hydrolyzable organometallic and organometalloid compds. for chem. sealing of HVAC systems)				
IT	Dehydration Heating systems Sealing compositions Seals (parts) (hydrolyzable organometallic and organometalloid compds. for chem. sealing of HVAC systems)				
IT	Air conditioning Ventilation, mechanical (systems; hydrolyzable organometallic and organometalloid compds. for chem. sealing of HVAC systems)				
IT	77-58-7, Dibutyltindilaurate 78-62-6, Dimethyldiethoxysilane 546-68-9 1067-25-0, Propyltrimethoxysilane 1067-55-6, Dibutylmethoxytin 1112-39-6 1185-55-3 1825-61-2, Trimethylmethoxysilane 1833-53-0 2768-02-7 7429-90-5D, Aluminum, hydrolyzable compds., uses 7439-89-6D,				

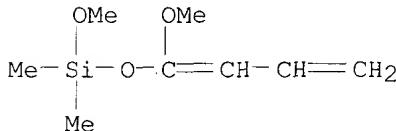
Iron, hydrolyzable compds., uses 7439-92-1D, Lead, hydrolyzable compds., uses 7439-96-5D, Manganese, hydrolyzable compds., uses 7440-21-3D, Silicon, hydrolyzable compds., uses 7440-31-5D, Tin, hydrolyzable compds., uses 7440-32-6D, Titanium, hydrolyzable compds., uses 7440-36-0D, Antimony, hydrolyzable compds., uses 7440-38-2D, Arsenic, hydrolyzable compds., uses 7440-42-8D, Boron, hydrolyzable compds., uses 7440-47-3D, Chromium, hydrolyzable compds., uses 7440-48-4D, Cobalt, hydrolyzable compds., uses 7440-56-4D, Germanium, hydrolyzable compds., uses 7440-58-6, Hafnium, uses 7440-62-2D, Vanadium, hydrolyzable compds., uses 7440-66-6D, Zinc, hydrolyzable compds., uses 7440-67-7D, Zirconium, hydrolyzable compds., uses 11099-06-2, Ethyl silicate 13494-80-9D, Tellurium, hydrolyzable compds., uses 22673-19-4 29910-14-3 184580-38-9 184580-40-3 **184580-42-5** 184580-44-7
RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses) (hydrolyzable organometallic and organometalloid compds. for chem. sealing of HVAC systems)

IT **184580-42-5**

RL: DEV (Device component use); NUU (Other use, unclassified); USES (Uses) (hydrolyzable organometallic and organometalloid compds. for chem. sealing of HVAC systems)

RN 184580-42-5 HCAPLUS

CN 2,4,6-Trioxa-3-silaheptane, 3,3-dimethyl-5-(2-propenylidene)- (9CI) (CA INDEX NAME)



L35 ANSWER 12 OF 30 HCAPLUS COPYRIGHT 2002 ACS

AN 1995:756198 HCAPLUS

DN 123:146912

TI Preparation of silicon-containing anhydrides as additives for semiconductor sealing epoxy resin composition

IN Shiobara, Toshio; Futatsumori, Koji; Arai, Kazuhiro; Shimizu, Hisashi; Ino, Shigeki

PA Shinetsu Chem Ind Co, Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C07F007-12

CC 42-11 (Coatings, Inks, and Related Products)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06271589	A2	19940927	JP 1993-88201	19930323
	US 5362887	A	19941108	US 1994-216566	19940323
PRAI	JP 1993-88201		19930323		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB The title compds. I [R1 = H, (un)substituted hydrocarbon, etc.; Rf = (CF2CF2OCF2)_j[C(CF3)FOCF2]_k(CF2)_l[CF2OC(CF3)F]_m(CF2OCF2CF2)_n; l = 0 - 8; k, m = 0 - 15; j, n = 0 or 1; a proviso is given] are claimed. The title compd. II was prep'd. from anhydride III and HSi(Me2)C2H4CF(CF3)OCF2CF2OCF(CF3)C2H4SiH(Me2).

ST silicon contg anhydride semiconductor sealing resin

IT Electronic device packaging
(prepn. of silicon-contg. anhydrides as additives for semiconductor sealing epoxy resin compn.)

IT 166955-05-1P 167115-23-3P 167115-24-4P
167115-25-5P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of silicon-contg. anhydrides as additives for semiconductor sealing epoxy resin compn.)

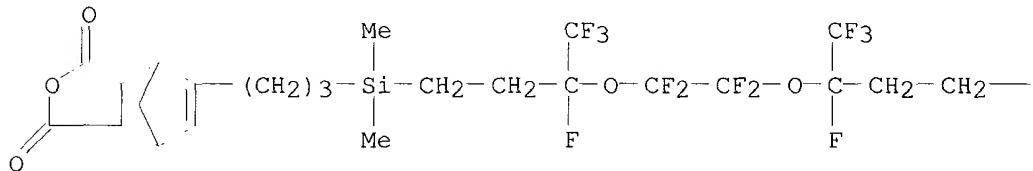
IT 134379-62-7 166955-06-2 167115-26-6 167115-27-7 167172-64-7
RL: RCT (Reactant)
(prepn. of silicon-contg. anhydrides as additives for semiconductor sealing epoxy resin compn.)

IT 166955-05-1P 167115-23-3P 167115-24-4P
167115-25-5P
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of silicon-contg. anhydrides as additives for semiconductor sealing epoxy resin compn.)

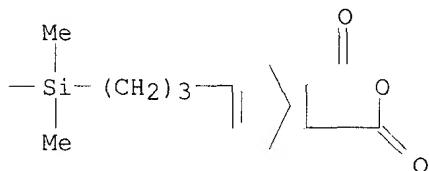
RN 166955-05-1 HCAPLUS

CN 4,7-Methanoisobenzofuran-1,3-dione, 5,5'-(7,9,9,10,10,12-hexafluoro-4,4,15,15-tetramethyl-7,12-bis(trifluoromethyl)-8,11-dioxa-4,15-disilaoctadecane-1,18-diyl)bis[3a,4,7,7a-tetrahydro- (9CI) (CA INDEX NAME)

PAGE 1-A

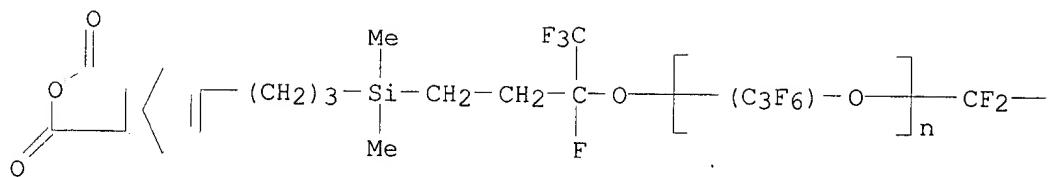


PAGE 1-B

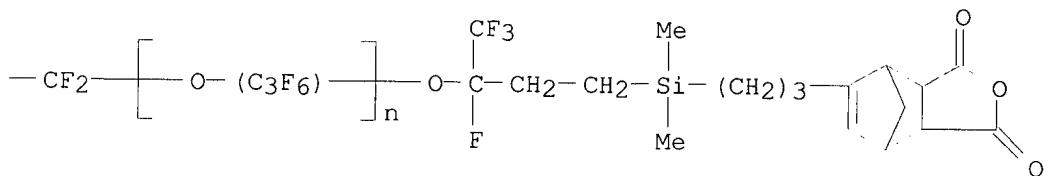


RN 167115-23-3 HCAPLUS
CN Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.,.alpha.'-(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[.omega.-[1-fluoro-3-[3-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methanoisobenzofuran-5-yl)propyl]dimethylsilyl]-1-(trifluoromethyl)propoxy]- (9CI) (CA INDEX NAME)

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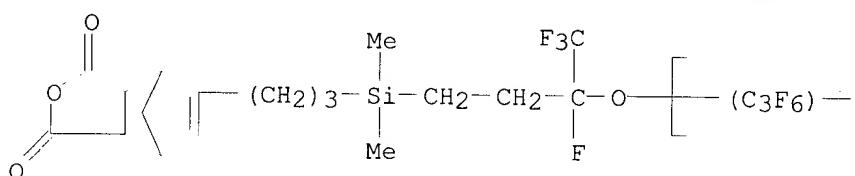
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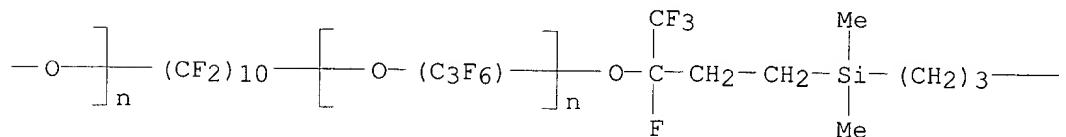
RN 167115-24-4 HCPLUS

CN Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.,.alpha.'-(1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-eicosafluoro-1,10-decanediyl)bis[.omega.-[1-fluoro-3-[[3-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methanoisobenzofuran-5-yl)propyl]dimethylsilyl]-1-(trifluoromethyl)propoxy]- (9CI) (CA INDEX NAME)

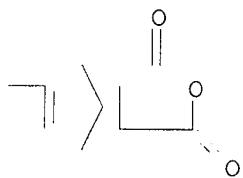
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PAGE 1-B



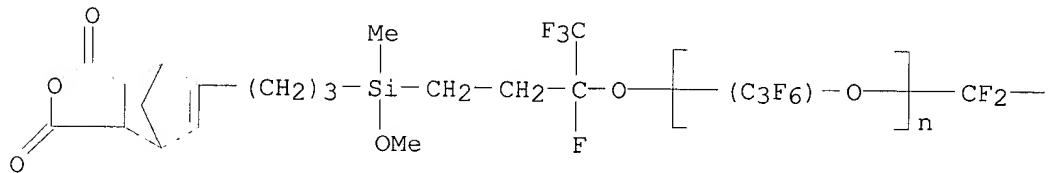
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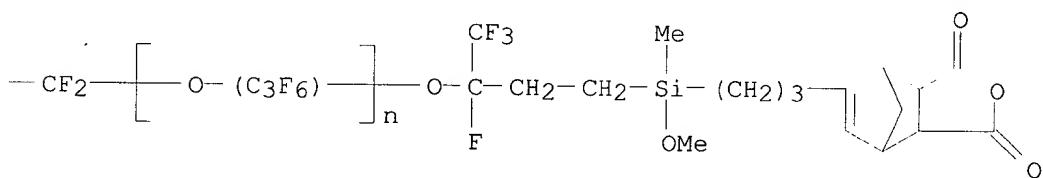
RN 167115-25-5 HCPLUS

CN Poly[oxy[trifluoro(trifluoromethyl)-1,2-ethanediyl]], .alpha.,.alpha.'-(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis[.omega.-[1-fluoro-3-[[3-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methanoisobenzofuran-5-yl)propyl]methoxymethylsilyl]-1-(trifluoromethyl)propoxy]- (9CI) (CA INDEX NAME)

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L35 ANSWER 13 OF 30 HCPLUS COPYRIGHT 2002 ACS

AN 1995:478075 HCPLUS

DN 122:216833

TI Silicone-modified acid anhydrides as hardeners for epoxy resin compositions

IN Shiobara, Toshio; Futatsumori, Koji; Arai, Kazuhiro; Ino, Shigeki; Shimizu, Hisashi

PA Shinetsu Chem Ind Co, Japan

SO Jpn. Kokai Tokyo Koho, 23 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C07F007-08

ICS C07F007-21; C08G059-42; C08G077-38

CC 42-11 (Coatings, Inks, and Related Products)
Section cross-reference(s): 38, 76

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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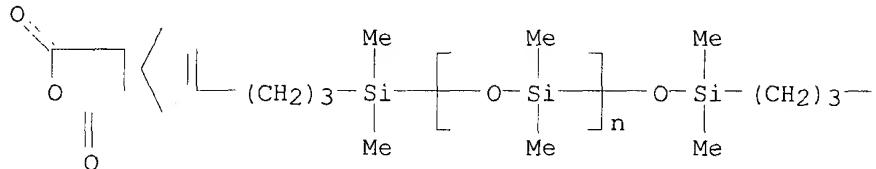
PI JP 06157551 A2 19940603 JP 1992-341386 19921127
AB Title acid anhydrides are siloxanes contg. 6-propyl-5-norbornene-2,3 acid anhydride (I) groups. Stirring bis(Me₂SiH)-terminated polydimethylsiloxane and 6-allyl-5-norbornene-2,3 acid anhydride in the presence of a Pt catalyst at 112.degree. gave a I-terminated polydimethylsiloxane, which was added to a compn. contg. Epikote 828, an imidazole catalyst, a coupler, carbon black, and SiO₂ and cured at 100-150.degree. for 6 h to form a test piece with flexural modulus 1040 kg/mm² and no cracks after 50 cycles under -50.degree. for 30 min and 150.degree. for 30 min.
ST silicone norbornene acid anhydride hardener; epoxy potting hardener
silicone anhydride; crack resistance epoxy potting hardener
IT Potting compositions
(crack-resistant, silicone-modified norbornene acid anhydrides as
hardeners for epoxy resin compns.)
IT Siloxanes and Silicones, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy, crack-resistant; silicone-modified norbornene acid
anhydride-cured potting compns.)
IT Siloxanes and Silicones, reactions
RL: RCT (Reactant)
(hydrogen, reaction with norbornene acid anhydrides for hardeners of
epoxy resin potting compns.)
IT Epoxy resins, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(siloxane-, crack-resistant; silicone-modified norbornene acid
anhydride-cured potting compns.)
IT 156048-35-0DP, norbornene acid anhydride-terminated, polymers with epoxy resins 159011-85-5DP, norbornene acid anhydride-contg., polymers with epoxy resins 161174-85-2DP, norbornene acid anhydride-terminated, polymers with epoxy resins
RL: IMF (Industrial manufacture); PREP (Preparation)
(crack-resistant potting compns.)
IT 25068-38-6D, polymers with silicone-modified norbornene acid anhydrides
162126-80-9 162126-81-0 162126-82-1
RL: TEM (Technical or engineered material use); USES (Uses)
(crack-resistant potting compns.)
IT 2370-88-9 115254-29-0 154702-67-7
RL: RCT (Reactant)
(reaction with allyl-norbornene acid anhydride for hardeners for epoxy
potting compns.)
IT 134379-62-7
RL: RCT (Reactant)
(reaction with hydrogen-contg. siloxanes for hardeners for epoxy
potting compns.)
IT **161174-82-9P** 162126-78-5P 162126-79-6P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)
(silicone-modified norbornene acid anhydrides as hardeners for epoxy
resin compns.)
IT **162126-80-9**
RL: TEM (Technical or engineered material use); USES (Uses)
(crack-resistant potting compns.)
RN 162126-80-9 HCPLUS
CN Phenol, 4,4'-(1-methyl ethylidene)bis-, polymer with (chloromethyl)oxirane and .alpha.-[[3-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methanoisobenzofuran-5-yl)propyl]dimethylsilyl]-.omega.-[[[3-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methanoisobenzofuran-5-

yl)propyl]dimethylsilyl]oxy]poly[oxy(dimethylsilylene)] (9CI) (CA INDEX
NAME)

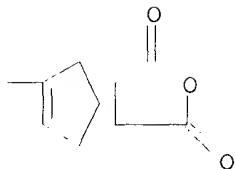
CM 1

CRN 161174-82-9
CMF (C₂ H₆ O Si)_n C₂₈ H₃₈ O₇ Si₂
CCI PMS

PAGE 1-A

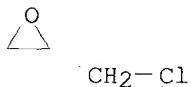


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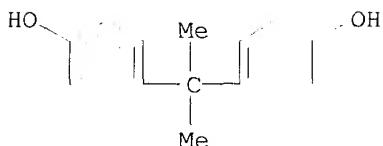
CM 2

CRN 106-89-8
CMF C₃ H₅ Cl O



CM 3

CRN 80-05-7
CMF C₁₅ H₁₆ O₂



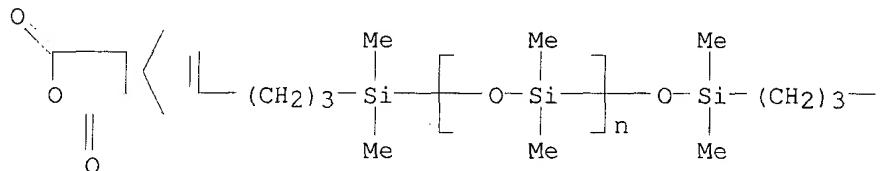
IT 161174-82-9P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
(Technical or engineered material use); PREP (Preparation); USES (Uses)

(silicone-modified norbornene acid anhydrides as hardeners for epoxy resin compns.)

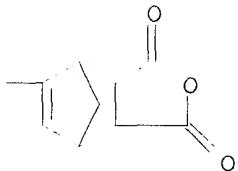
RN 161174-82-9 HCPLUS

CN Poly[oxy(dimethylsilylene)], .alpha.-[[3-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methanoisobenzofuran-5-yl)propyl]dimethylsilyl]-.omega.-[[[3-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methanoisobenzofuran-5-yl)propyl]dimethylsilyl]oxy]- (9CI) (CA INDEX NAME)

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L35 ANSWER 14 OF 30 HCPLUS COPYRIGHT 2002 ACS

AN 1995:392457 HCPLUS

DN 123:12010

TI Heat-resistant polyimide coating films with good adhesion properties to semiconductors

IN Ikeda, Yoshito; Okamoto, Akio; Inoe, Tadashi

PA Denki Kagaku Kogyo Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09D179-08

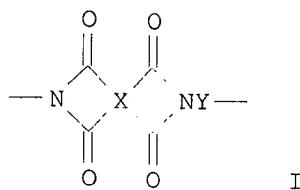
ICS H01L021-52

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 06340847	A2	19941213	JP 1993-151370	19930529
GI					



AB The title coating films comprise polyimide I [X = tetravalent org. group contg. SiHZ; Z = H, (un)substituted alkyl; Y = bivalent org. group] with intrinsic viscosity ≥ 0.1 dL/g. The polymers are useful in heat- and solvent-resistant polyimide coating films with good adhesion properties to semiconductors. Thus, 2.14 g 4,4'-diaminodiphenyl ether and 3.55 g bis[4-(1,2,3,6-tetrahydrophthalic anhydride)]silane were dissolved in HCONMe₂, then cast to form a film, which was immersed in 1:1 Ac₂O-pyridine to give a polyimide film, 1.0 g of which was dissolved in 7.5 mL γ -butyrolactone (II), and spread on Si wafers. II was distd. off to form polymer films, which were heated at 200.degree. and 1 mmHg for 1 h to give 6-8 μ m films showing cross-cut adhesion 100/100 even after pressure cooker test (125.degree., 5 h).

ST polyimide coating adhesion semiconductor; heat resistant polyimide coating semiconductor; solvent resistant polyimide coating semiconductor

IT Semiconductor devices
(polyimide coatings with good heat and solvent resistance and adhesion to semiconductors)

IT Coating materials
(heat- and solvent-resistant, polyimide coatings with good heat and solvent resistance and adhesion to semiconductors)

IT Polyimides, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(silicon-contg., polyimide coatings with good heat and solvent resistance and adhesion to semiconductors)

IT 160877-28-1P 160877-29-2P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(Heat-resistant polyimide coating films with good adhesion properties to semiconductors)

IT 160877-30-5P 160877-31-6P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyimide coatings with good heat and solvent resistance and adhesion to semiconductors)

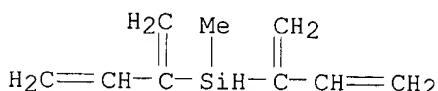
IT 126739-94-4P 160877-27-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
(prepn. and polymn. of phthalic anhydride-substituted silanes)

IT 108-31-6, Maleic anhydride, reactions 157727-77-0 **157727-78-1**
RL: RCT (Reactant)
(reaction of silanes with maleic anhydride)

IT 7440-21-3, Silicon, uses 7631-86-9, Silicon dioxide, uses 12033-89-5, Silicon nitride, uses
RL: DEV (Device component use); USES (Uses)
(silicon wafers; polyimide coatings with good heat and solvent resistance and adhesion to semiconductors)

IT **157727-78-1**
RL: RCT (Reactant)
(reaction of silanes with maleic anhydride)

RN 157727-78-1 HCAPLUS
CN Silane, methylbis(1-methylene-2-propenyl)- (9CI) (CA INDEX NAME)



L35 ANSWER 15 OF 30 HCAPLUS COPYRIGHT 2002 ACS
AN 1995:350426 HCAPLUS
DN 122:268242
TI Polyimides and precursors and coating solutions thereof
IN Ikeda, Yoshito; Okamoto, Akio; Inoe, Tadashi
PA Denki Kagaku Kogyo K. K., Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
COPENA: JKKWAE

CODEN: JKXXAF

DI Patent
JA Japanese

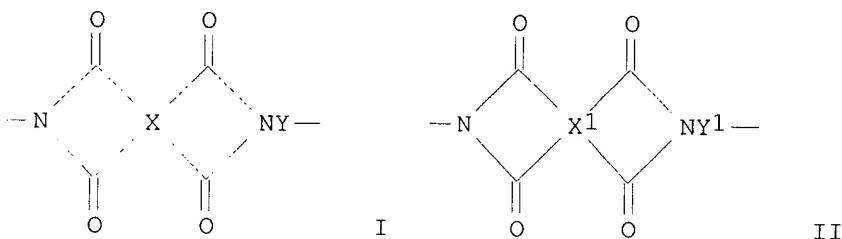
LA Japanese
LG TCM 600

IC ICM C08G073-10
CC 43-10 (Continued)

CC 42-10 (Coatings, Inks, and Related Products)
EAN CNT 1

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
PI JP 06172528	A2	19940621	JP 1992-351600	19921209
GI				



AB The title polymers contain I and II repeating units in 100-1:0-99 molar ratio and have intrinsic viscosity η_{inh} 0.1 dL/g [X = SiH₂ group-contg. tetravalent org. group; X' = tetravalent org. group; Y, Y' = divalent org. group; Z = H, (un)substituted alkyl, alkenyl, alkoxy, Ph, halogen]. A soln. of 2.14 g 4,4'-diaminodiphenyl ether in DMF was treated with 3.55 g 4,4'-silylenebis(1,2,3,6-tetrahydrophthalic anhydride) to give a polyamic acid soln. which was coated on a Cu plate, dried, and baked at 250.degree. for 5 h to give an unpeelable coating.

ST polyimide coating

IT 126739-94-4P 160877-27-0P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)
(manuf. and polymn. of)

IT 160877-28-1P 160877-29-2P 160877-30-5P 160877-31-6P 160877-32-7P
160995-10-8P 160995-11-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manuf. for coatings)

IT 108-31-6, 2,5-Furandione, reactions

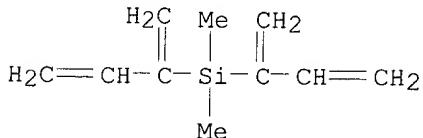
IT RL: RCT (Reactant)
 (reaction with bis(butadienyl)silane)
84140-15-8 157727-77-0

IT RL: RCT (Reactant)
 (reaction with maleic anhydride)
84140-15-8

IT RL: RCT (Reactant)
 (reaction with maleic anhydride)

RN 84140-15-8 HCPLUS

CN Silane, dimethylbis(1-methylene-2-propenyl)- (9CI) (CA INDEX NAME)



L35 ANSWER 16 OF 30 HCPLUS COPYRIGHT 2002 ACS
 AN 1994:703215 HCPLUS
 DN 121:303215
 TI Method of producing an oxygen-barrier coating containing trimethoxysilyl functional pentadienoate
 IN Lee, Chi-Long; Yeh, Ming-Hsiung
 PA Dow Corning Corp., USA
 SO U.S., 4 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM B05D003-06
 NCL 427515000
 CC 42-10 (Coatings, Inks, and Related Products)
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5348771	A	19940920	US 1993-155039	19931119
JP 07188581	A2	19950725	JP 1994-276311	19941110
EP 654510	A1	19950524	EP 1994-308391	19941114
EP 654510	B1	19970514		

R: BE, DE, FR, GB, SE

PRAI US 1993-155039 19931119

AB The method comprises coating a plastic substrate with a silane soln. contg. Q(R1O)3Si [Q = R2(CH:CH)nCH:CR3COR5; R1 = unsubstituted monovalent hydrocarbyl; R2 = aryl, alkoxyaryl, alkaryl; R3 = CN, CO2R4; R4 = R1; R5 = O(CH2)aCH:CH, NR6(CH2)b; R6 = H, C1-6 hydrocarbyl; a = 1-5; b = 3-6; n .gtoreq. 0; n = 0 when R2 = naphthyl radical], itaconic acid, water, and a solvent, then curing the silane soln. by UV. Thus, applying a soln. of N-3-(trimethoxysilyl)propyl-2-cyano-5-phenyl-2,4-pentadienoamide in MeOH on a low-d. polyethylene substrate, then irradn. by UV gave a film having oxygen permeability 92 mL/m2/day at 85% relative humidity.

ST oxygen impermeable silane coating; UV curable silane coating; trimethoxysilyl pentadienoate UV curable coating

IT Coating materials

(UV-curable, method of producing an oxygen-barrier coating contg. trimethoxysilyl functional pentadienoate)

IT 97-65-4, Itaconic acid, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (coating; method of producing an oxygen-barrier coating contg.)

trimethoxysilyl functional pentadienoate)

IT 159304-75-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (method of producing an oxygen-barrier coating contg. trimethoxysilyl
 functional pentadienoate)

IT 13822-56-5, 3-Aminopropyltrimethoxsilane
 RL: RCT (Reactant)
 (reaction with Me 2-cyano-5-phenyl-2,4-pentadienoate)

IT 113966-65-7
 RL: RCT (Reactant)
 (reaction with aminopropyltrimethoxsilane)

IT 159304-75-3
 RL: TEM (Technical or engineered material use); USES (Uses)
 (method of producing an oxygen-barrier coating contg. trimethoxysilyl
 functional pentadienoate)

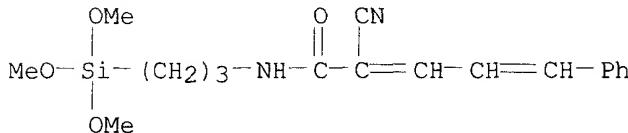
RN 159304-75-3 HCPLUS

CN 2,4-Pentadienamide, 2-cyano-5-phenyl-N-[3-(trimethoxysilyl)propyl]-,
 homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 159304-74-2

CMF C18 H24 N2 O4 Si



L35 ANSWER 17 OF 30 HCPLUS COPYRIGHT 2002 ACS
 AN 1993:605548 HCPLUS
 DN 119:205548
 TI Preparation and use of siloxanes bearing norbornenyl groups
 IN Herzog, Christian
 PA Wacker-Chemie G.m.b.H., Germany
 SO Ger. Offen., 8 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM C07F007-10
 ICS C08G077-392; C08L083-07; C08L083-08
 ICA C09D183-07; C09D183-08; C08L083-05; C08J003-24
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 29, 37, 43
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4128932	A1	19930304	DE 1991-4128932	19910830
AB	The uncured siloxanes R1aR2bSiO2-0.5(a + b) [R1 = 5-norborn-2-enyl group, R2 = hydrocarbyl; a = 0 or 1 (av. 0.01-1); b = 1-3 (av. 0.8-2.5)], useful in antiblocking coatings, are prep'd. The Pt-catalyzed reaction of 238 g HSi group-terminated di-Me siloxane (viscosity 7.2 mm ² /s at 25.degree.) with 46 g norbornadiene at 100-135.degree. gave 275 g siloxane (I no. 45) which was heated (50 g) with 450 g OH group-terminated di-Me siloxane (viscosity 20 Pa-s) and PhCH ₂ NMe ₃ ⁺ OH ⁻ at 100.degree. for 5 h to give 352 g oil with viscosity 430 mm ² /s and I no. 4.2. A mixt. of this oil 44,				

3-mercaptopropyl Me siloxane 6, and Darocure-1173 1 g was coated (5 .mu.m) on satinized parchment paper and cured in 1.5 s by an 80-W/cm Hg lamp at a distance of 10 cm.

ST antiblocking coating norbornenyl siloxane; photocurable coating norbornenyl siloxane; norbornadiene reaction hydrogen siloxane; paper coating antiblocking siloxane

IT Paper
(antiblocking, photocurable coatings for, norbornenyl siloxanes as)

IT Siloxanes and Silicones, reactions
RL: RCT (Reactant)
(Me hydrogen, reaction of, with norbornadiene)

IT Coating materials
(blocking-resistant, photocurable, norbornenyl siloxanes, for paper)

IT Siloxanes and Silicones, preparation
RL: TEM (Technical or engineered material use); USES (Uses)
(norbornenyl group-contg., coatings, antiblocking and photocurable, manuf. of)

IT 121-46-0DP, Bicyclo[2.2.1]hepta-2,5-diene, reaction products with hydrogen siloxanes
RL: TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(coatings, antiblocking and photocurable, manuf. of)

IT 120687-11-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

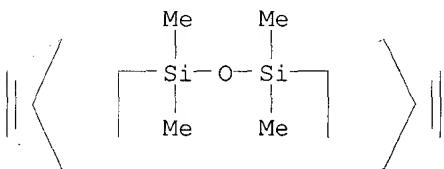
IT 3277-26-7, 1,1,3,3-Tetramethyldisiloxane
RL: RCT (Reactant)
(reaction of, with norbornadiene)

IT 121-46-0, Bicyclo[2.2.1]hepta-2,5-diene
RL: RCT (Reactant)
(reaction of, with tetramethyldisiloxane)

IT 120687-11-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 120687-11-8 HCPLUS

CN Disiloxane, 1,3-bis(bicyclo[2.2.1]hept-5-en-2-yl)-1,1,3,3-tetramethyl- (9CI) (CA INDEX NAME)

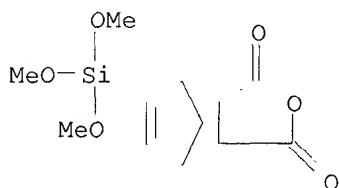


L35 ANSWER 18 OF 30 HCPLUS COPYRIGHT 2002 ACS
AN 1992:450885 HCPLUS
DN 117:50885
TI Solutions of curable polyimides containing alkoxy silyl groups for coating electronic devices
IN Okinoshima, Hiroshige; Kato, Hideto
PA Shin-Etsu Chemical Co., Ltd., Japan
SO Ger. Offen., 20 pp.
CODEN: GWXXBX
DT Patent
LA German
IC ICM C08G073-10

ICS C08L079-08; C09D179-08; H01L023-02
 ICA H01C001-034
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 38, 76

FAN.CNT 1

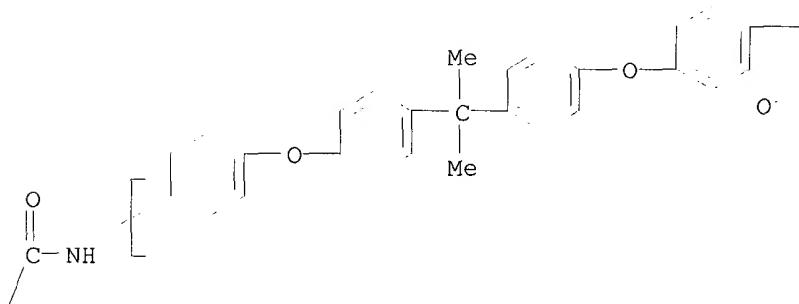
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 4125908	A1	19920213	DE 1991-4125908	19910805
	JP 04091130	A2	19920324	JP 1990-208836	19900806
	JP 2551214	B2	19961106		
	US 5109058	A	19920428	US 1991-739449	19910802
PRAI	JP 1990-208836		19900806		
AB	A storage-stable, low-viscosity soln. of a curable resin prep'd. by the reaction of an amino group-terminated polyimide and a compd. contg. alkoxy silyl and carboxylic anhydride groups is applied to electronic devices and cured to give a protective coating having good adhesion, solvent resistance, mech. strength, and elec. properties. The cyclohexanone soln. of a reaction product of 0.02 mol 5-trimethoxysilyl-2,3-dicarboxynorbornane anhydride and a polyimide prep'd. from 0.04 mol bis(4-aminophenyl) ether and 0.03 mol 2,2-bis(3,4-dicarboxyphenyl)-1,1,1,3,3,3-hexafluoropropane dianhydride, stable during 3 mo storage at 5.degree., was applied to a silica surface and cured 1 h at 150.degree. and 1 h at 200.degree. to give an adherent coating with good resistance to diglyme.				
ST	polyimide alkoxy silane coating electronic device; silica electronic device polyimide coating; adhesion polyimide coating electronic device; silane alkoxy polyimide coating crosslinking; crosslinking polyimide alkoxy silane coating				
IT	Electric apparatus (coatings for, curable polyimides contg. alkoxy silyl groups as)				
IT	Crosslinking (of polyimides contg. alkoxy silyl groups, as coatings)				
IT	Coating materials (polyimides, alkoxy silyl group-contg., for electronic devices)				
IT	Polyimides, uses RL: TEM (Technical or engineered material use); USES (Uses) (alkoxy silyl-terminated, coatings, curable, for electronic devices)				
IT	133716-15-1D, reaction products with methoxysilyldicarboxynorbornane anhydride 142381-53-1D, reaction products with methoxysilyldicarboxynorbornane anhydride 142382-74-9D, polyimides terminated by 142382-75-0D, polyimides terminated by 142382-76-1D, polyimides terminated by 142418-61-9 142431-02-5 RL: TEM (Technical or engineered material use); USES (Uses) (coatings, for electronic devices)				
IT	142382-75-0D, polyimides terminated by 142431-02-5 RL: TEM (Technical or engineered material use); USES (Uses) (coatings, for electronic devices)				
RN	142382-75-0 HCPLUS				
CN	4,7-Methanoisobenzofuran-1,3-dione, 3a,4,7,7a-tetrahydro-5-(trimethoxysilyl)- (9CI) (CA INDEX NAME)				



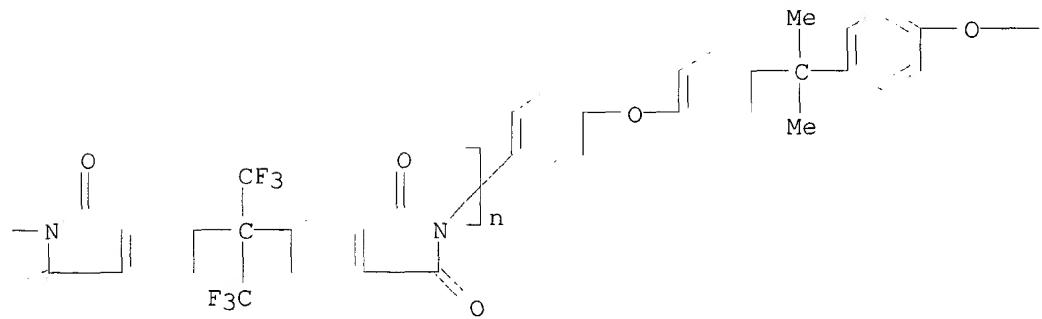
RN 142431-02-5 HCPLUS

CN Poly[(1,3-dihydro-1,3-dioxo-2H-isoindole-2,5-diyl)[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene](1,3-dihydro-1,3-dioxo-2H-isoindole-5,2-diyl)-1,4-phenyleneoxy-1,4-phenylene(1-methylethylidene)-1,4-phenyleneoxy-1,4-phenylene], .alpha.-[4-[1-[4-[4-[[3-carboxy(trimethoxysilyl)bicyclo[2.2.1]hept-5-en-2-yl]carbonyl]amino]phenoxy]phenyl]-1-methylethyl]phenoxy]phenyl]-.omega.-[[3-carboxy(trimethoxysilyl)bicyclo[2.2.1]hept-5-en-2-yl]carbonyl]amino]- (9CI) (CA INDEX NAME)

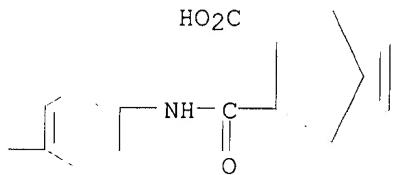
PAGE 1-A



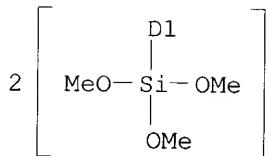
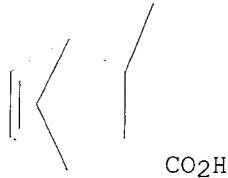
PAGE 1-B



PAGE 1-C



PAGE 2-A



L35 ANSWER 19 OF 30 HCAPLUS COPYRIGHT 2002 ACS

AN 1992:409993 HCAPLUS

DN 117:9993

TI Siloxane compositions for zinc-rich paint binders

IN Mizohata, Koji; Tanaka, Masatoshi

PA Nippon Paint K. K., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C08G077-20

ICA C09D005-10

CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 35

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04046932	A2	19920217	JP 1990-158109	19900615

OS MARPAT 117:9993

AB Title compns., forming films with good adhesion and receptivity of other coatings, comprise simultaneously or sep. acid-hydrolyzed mixts. of 100 parts (R1O)4Si (R1 = C1-5 alkyl) and/or its condensation products and 5-300 parts (R1O)3SiR2 (R2 = C2-5 unsatd. hydrocarbyl). Thus, an iso-PrOH soln. of 100 parts (EtO)4Si and 20 parts vinyltrimethoxysilane was heated with 21 parts 0.01N HCl at 60.degree. to give a hydrolyzate, 80 parts of which was mixed with 15 parts powd. Zn and 5 parts clay to give a Zn-rich paint. A sandblasted steel sheet was coated with the paint with good

adhesion and receptivity of a com. chlorinated rubber- or epoxy resin-based primer.

ST siloxane binder zinc rich paint; acid hydrolysis alkyl silicate; trialkoxysilane unsatd hydrocarbyl acid hydrolysis

IT Coating materials
(zinc-rich, binders for, mixed hydrolyzates of tetraalkoxysilanes and unsatd. hydrocarbon group-contg. trialkoxysilanes as)

IT 93830-52-5D, hydrolyzates
RL: USES (Uses)
(blends with alkyl silicate hydrolyzates, binders for zinc-rich paints)

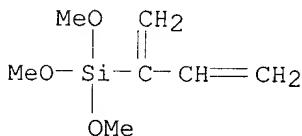
IT 2550-04-1D, Allyltrimethoxysilane, hydrolyzates 2768-02-7D, Vinyltrimethoxysilane, hydrolyzates
RL: USES (Uses)
(blends with tetraalkoxysilane hydrolyzates, binders for zinc-rich paints)

IT 78-10-4D, Tetraethoxysilane, hydrolyzates 681-84-5D, Tetramethoxysilane, hydrolyzates 4766-57-8D, Tetrabutoxysilane, hydrolyzates
RL: USES (Uses)
(blends with unsatd. hydrocarbon group-contg. trialkoxysilane hydrolyzates, binders for zinc-rich paints)

IT 93830-52-5D, hydrolyzates
RL: USES (Uses)
(blends with alkyl silicate hydrolyzates, binders for zinc-rich paints)

RN 93830-52-5 HCPLUS

CN Silane, trimethoxy(1-methylene-2-propenyl)- (9CI) (CA INDEX NAME)



L35 ANSWER 20 OF 30 HCPLUS COPYRIGHT 2002 ACS
AN 1991:104495 HCPLUS
DN 114:104495
TI Silica-coated synthetic resin products and their manufacture
IN Takahashi, Tooru; Hatasawa, Takenobu; Yamaguchi, Kenzo; Myamoto, Kazuaki
PA Sekisui Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF

DT Patent
LA Japanese
IC ICM C08J007-04
ICS B05D007-02; B32B009-00
CC 42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02206624	A2	19900816	JP 1989-28294	19890206

PI The title products, with excellent adhesion, abrasion resistance, weatherability, and chem. resistance, are manufd. by coating carbonyl bond-contg. polymer-based moldings with copolymers of primary or secondary amino-contg. aminostyrenes and .gtoreq.1 monomer selected from .alpha.,.beta.-unsatd. carboxylic anhydrides, silylated butadienes, and alkoxy silane-contg. vinyl monomers then with a SiO₂ top layer. Thus, a polycarbonate plate was immersed in a primer contg. p-aminostyrene 100, maleic anhydride 70, Bz2O2 10, and n-hexane 50 parts, heated at 80.degree.

for 30 min to form a 1-.mu.m coating, and topped with a 5000-.ANG. SiO₂ coating using a silica gel soln. to give a test piece showing good adhesion initially and after 200-h exposure to weather-o-meter, 1 h in boiling water, heated 50-h at 80.degree., and 3-wk at 65.degree. and 95% relative humidity, resp.

ST polycarbonate molding silica coating; aminostyrene polymer primer silica coating; weatherability silica coated molding; water resistance silica coated molding

IT Polycarbonates, uses and miscellaneous
Urethane polymers, uses and miscellaneous
RL: USES (Uses)
(silica coatings on, aminostyrene polymer primers for)

IT Coating materials
(heat- and water- and weather-resistant, silica, on plastic moldings, aminostyrene polymer primers for)

IT Polyketones
RL: USES (Uses)
(polyether-, silica coatings on, aminostyrene polymer primers for)

IT Polyethers, uses and miscellaneous
RL: USES (Uses)
(polyketone-, silica coatings on, aminostyrene polymer primers for)

IT Coating materials
(primers, aminostyrene polymers, for silica on plastic moldings)

IT 7631-86-9, Silica, uses and miscellaneous
RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, for plastics, aminostyrene polymer primers for)

IT 132357-12-1 132357-13-2 132357-14-3 **132357-15-4**
132357-16-5 132357-17-6 132357-18-7 132357-19-8
RL: USES (Uses)
(primers, for silica coatings on plastics)

IT 25038-59-9, Poly(ethylene terephthalate), uses and miscellaneous
RL: USES (Uses)
(silica coatings on, aminostyrene polymer primers for)

IT **132357-15-4 132357-16-5**
RL: USES (Uses)
(primers, for silica coatings on plastics)

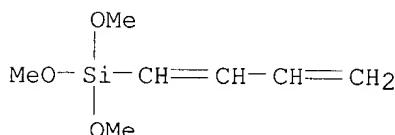
RN 132357-15-4 HCPLUS

CN Benzenamine, 4-ethenyl-, polymer with 1,3-butadienyltrimethoxysilane (9CI)
(CA INDEX NAME)

CM 1

CRN 90283-31-1

CMF C7 H14 O3 Si



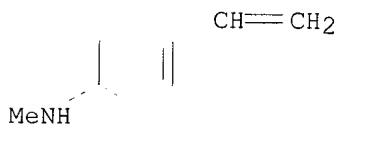
CM 2

CRN 1520-21-4

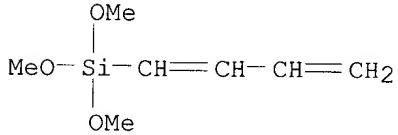
CMF C8 H9 N

$$\begin{array}{c}
 \text{CH}=\text{CH}_2 \\
 | \quad || \\
 \text{H}_2\text{N}
 \end{array}$$

RN 132357-16-5 HCPLUS
CN Benzenamine, 4-ethenyl-N-methyl-, polymer with 1,3-butadienyltrimethoxysilane (9CI) (CA INDEX NAME)
CM 1
CRN 102877-42-9
CMF C9 H11 N



CM 2
CRN 90283-31-1
CMF C7 H14 O3 Si



L35 ANSWER 21 OF 30 HCPLUS COPYRIGHT 2002 ACS
AN 1989:156218 HCPLUS
DN 110:156218
TI Heat-resistant electrically insulating siloxane-grafted ethylene-olefin rubber coatings
IN Kawada, Takashi; Hikita, Masahiro; Makino, Kenya
PA Japan Synthetic Rubber Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM H01B003-44
ICS C08K003-00; C08L051-06; H01B003-00
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 39
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----

PI JP 63146303 A2 19880618 JP 1986-292194 19861208
AB The coatings contain inorg. fillers and siloxane-grafted ethylene-olefin copolymer rubbers prep'd. by copolymg. C2H4, .alpha.-olefins, and

optionally nonconjugated dienes with unsatd. halosilanes and coupling with OH-terminated polysiloxanes (A). Contacting 5:5:4 C2H4-C3H6-H with 1.25 mmol 5-(dichloromethylsilyl)-2-norbornene in presence of Ziegler catalysts at 20.degree. for 0.5 h, stirring with A (XF 40-518) for 1 h, and drying at 100.degree. gave a polymer (I), which was kneaded with ZnO, stearic acid, Satintone 1, HAF black, paraffin oil and wax, Irganox 1010, Percumyl D, and Vulnoc DGM and vulcanized at 160.degree. for 35 min to give a product showing resistivity 7.3 .times. 1016 .OMEGA.-cm and tensile strength 135 kg/cm² initially, which changed by -8% after heating at 175.degree. for 72 h, vs. 2.3 .times. 1016, 121, and -67%, resp. using JSR-EP 21 instead of I.

ST siloxane grafted EPDM coating antiaging; heat resistance EPDM silicone rubber; elec insulating EPDM silicone rubber

IT Rubber, silicone, uses and miscellaneous
RL: TEM (Technical or engineered material use); USES (Uses)
(alkene-diene-ethylene-, graft, coatings, elec. insulating,
heat-resistant)

IT Rubber, synthetic
RL: TEM (Technical or engineered material use); USES (Uses)
(alkene-diene-ethylene-siloxane, graft, coatings, elec. insulating,
heat-resistant)

IT Kaolin, compounds
RL: USES (Uses)
(calcined, ethylene-propylene-siloxane graft rubber coatings contg.,
elec. insulating, heat-resistant)

IT Electric insulators and Dielectrics
(coatings, heat-resistant, ethylene-propylene-siloxane graft rubbers)

IT Rubber, silicone, uses and miscellaneous
RL: TEM (Technical or engineered material use); USES (Uses)
(ethylene-propene-, graft, coatings, elec. insulating, heat-resistant)

IT Rubber, ethylene-propene
(silicone-, graft, coatings, elec. insulating, heat-resistant)

IT 1343-88-0, Magnesium silicate
RL: USES (Uses)
(ethylene-propylene-siloxane graft rubber coatings contg., elec.
insulating, heat-resistant)

IT 101969-14-6D, reaction products with hydroxy-terminated siloxanes
RL: USES (Uses)
(rubber, coatings, elec. insulating, heat-resistant)

IT 9010-79-1
RL: USES (Uses)
(rubber, silicone-, graft, coatings, elec. insulating, heat-resistant)

IT 101969-14-6D, reaction products with hydroxy-terminated siloxanes
RL: USES (Uses)
(rubber, coatings, elec. insulating, heat-resistant)

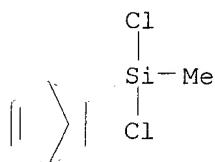
RN 101969-14-6 HCPLUS

CN Silane, bicyclo[2.2.1]hept-5-en-2-yldichloromethyl-, polymer with ethene
and 1-propene (9CI) (CA INDEX NAME)

CM 1

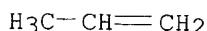
CRN 18245-94-8

CMF C8 H12 Cl2 Si



CM 2

CRN 115-07-1
CMF C3 H6



CM 3

CRN 74-85-1
CMF C2 H4



L35 ANSWER 22 OF 30 HCPLUS COPYRIGHT 2002 ACS
AN 1988:612430 HCPLUS
DN 109:212430
TI Photochemistry of polymeric systems. VIII. Photo-crosslinking of polysiloxanes including cinnamic, furacrylic or .alpha.-cyano .beta.-styrylacrylic ester groups: a comparative study
AU Mercier, R.; Coqueret, X.; Lablache-Combier, A.; Loucheux, C.
CS Lab. Chim. Org. Macromol., Univ. Sci. Tech. Lille Flandres Artois, Villeneuve D'Ascq, 59655, Fr.
SO Eur. Polym. J. (1988), 24(7), 639-45
CODEN: EUPJAG; ISSN: 0014-3057
DT Journal
LA English
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 35
AB Polysiloxane copolymers contg. 2-25 mol% of methylhydrosiloxane units were functionalized by Pt catalyzed hydrosilylation of vinylsilyl-terminated cinnamic, .beta.- (2-furyl)acrylic acid, or .alpha.-cyano-.beta.-styryl acrylic esters. The modification gave liq. photochem. crosslinkable polymers with practical sensitivity strongly dependent on the nature of the dimerizable ester, the starting polymer chain length and the functionalization rate. Besides the influence of these 3 basic parameters, branching side-reactions during the hydrosilylation interestingly enhanced the photosensitivity of the obtained polymers but had to be controlled to preserve sufficient flow-properties for solvent-free coating applications.
ST photochem crosslinking siloxane copolymer coating; photosensitive coating siloxane copolymer crosslinking; cinnamic ester siloxane copolymer crosslinking; furacrylic ester siloxane copolymer crosslinking; cyanostyrylacrylic ester siloxane copolymer crosslinking

IT Siloxanes and Silicones, reactions
 RL: RCT (Reactant)
 (functionalization of, by hydrosilylation of vinylsilyl-terminated cinnamic, furyl acrylic acid or cyanostyryl acrylic acid esters, photocrosslinking in relation to)

IT Hydrosilylation catalysts
 (hexachloroplatinic acid, for vinylsilyl-terminated photosensitive esters, for functionalization of siloxane copolymers)

IT Hydrosilylation
 (of vinylsilyl-terminated photosensitive esters, in functionalization of siloxane copolymers)

IT Chains, chemical
 (structure of, of siloxanes contg. cinnamic, furacrylic or cyanostyryl acrylic ester groups)

IT Crosslinking
 (photochem., of siloxanes contg. cinnamic, furacrylic or cyanostyryl acrylic ester groups)

IT Coating materials
 (solventless, photocrosslinkable siloxanes contg. cinnamic, furacrylic or cyanostyryl acrylic ester groups)

IT 108527-03-3D, reaction products with siloxane copolymers 117523-13-4D,
 reaction products with siloxane copolymers 117523-14-5D,
 reaction products with siloxane copolymers
 RL: USES (Uses)
 (photocrosslinkable, for coatings)

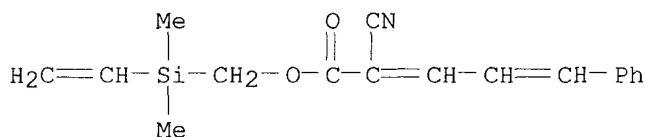
IT 108527-03-3P 117523-13-4P **117523-14-5P**
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and reaction of, with vinyl-terminated dimethylsilane)

IT 16709-86-7, Chloromethyldimethylvinylsilane
 RL: RCT (Reactant)
 (reaction of, with cinnamic, furacrylic or cyanostyryl acrylic esters)

IT **117523-14-5D**, reaction products with siloxane copolymers
 RL: USES (Uses)
 (photocrosslinkable, for coatings)

RN 117523-14-5 HCPLUS

CN 2,4-Pentadienoic acid, 2-cyano-5-phenyl-, (ethenyldimethylsilyl)methyl ester (9CI) (CA INDEX NAME)



RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and reaction of, with vinyl-terminated dimethylsilane)

L35 ANSWER 23 OF 30 HCPLUS COPYRIGHT 2002 ACS
 AN 1984:474399 HCPLUS
 DN 101:74399
 TI Olefinic unsaturated siloxanes and their use as reactive thinners for radically crosslinkable lacquer systems
 IN Eimers, Erich; Reuter, Knud; Dhein, Rolf
 PA Bayer A.-G. , Fed. Rep. Ger.
 SO Ger. Offen., 19 pp.
 CODEN: GWXXBX
 DT Patent
 LA German

IC C07F007-18; C09D003-82
CC 42-5 (*Coatings, Inks, and Related Products*)
FAN.CNT 1

PATENT NO.		KIND	DATE	APPLICATION NO.		DATE
PI	DE 3230867	A1	19840223	DE 1982-3230867	19820819	
	EP 106047	A1	19840425	EP 1983-107758	19830806	
	EP 106047	B1	19851023			
R: AT, DE, FR, GB, IT, NL, SE						
	AT 16187	E	19851115	AT 1983-107758	19830806	
PRAT	DE 1982-3230867		19820819			

AB Silanes bearing (1,5,7-octatrien-3-yl)methoxy and optionally (2-alkenoxyloxy)alkoxy groups are reactive diluents for radically cured coatings, esp. for air-drying alkyd resins. Thus, adding 91.2 parts 3-vinyl-5,7-octadien-2-ol [29539-06-8] over 30 min to 33 parts MeSi(OAc)3 [4253-34-3] and 0.003 part toluhydroquinone stirred at 80.degree. and stirring 2 h gave 64.2 parts 901 MeSi[OCHMeCH(CH:CH2)CH2CH:CHCH:CH2]3 [923-26-2]. A soln. of this compd. 10, soya fatty acid alkyd resin (oil length 48%, acid no. 10, viscosity of 65% xylene soln. 4 Pa-s) 23.5, mineral spirits 9.5, Co octanoate (6% Co) 0.28, Pb octanoate (24% Pb) 1.4, and MEK oxime 0.5 part coated to 120 .mu. on glass had drying rating (dust dry = 2 - 2+) 4, 2, 1, and 0 after 1, 2, 3, and 4 h, resp., and pendulum hardness 15.0 and 19.0 s after 24 and 48 h, resp., compared with 4, 4, 3, 2, 19.0, and 20.0, resp., with (dicyclopentadienyloxy)ethyl methacrylate as reactive diluent.

ST reactive diluent alkyd coating; silane unsatd reactive diluent; vinyloctadienol silane deriv; methacrylate silyloxyalkyl coating

IT Coating materials (alkyd resin, polyunsatd. silanes as reactive diluents for)

IT 923-26-2 29539-06-8

RL: RCT (Reactant)

(reaction of, with triacetoxydimethylsilane)

IT 4253-34-3

RL: RCT (Reactant)

(reaction of, with vinyloctad)

91287-94-4 9128

RL: USES (Uses)

(reactive diluents, for air-d

91287-94-4 91287

RL: USES (Uses)

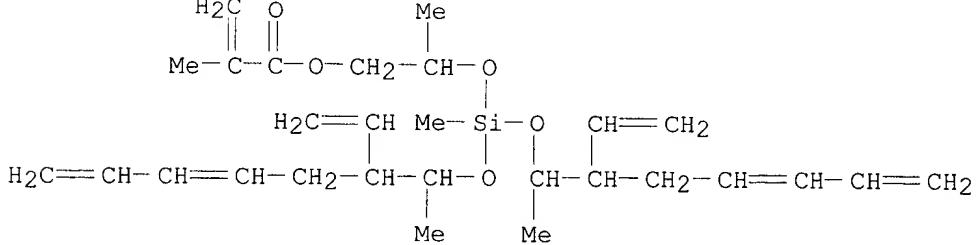
(reactive diluents, for air-d

91287-94-4 HCA

CN 2-Propenoic acid, 2-methyl-, 2-[[bis[(2-ethenyl)-1-m

2-heptadienyl)oxylmet-

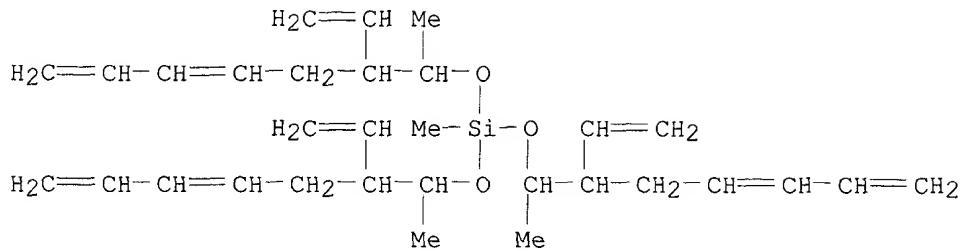
heptadichloro,2,2,2-trimethyl-1,1,1-trifluoroethyl ester (9CI) (CA INDEX NAME)



RN 91287-95-5 HCAPLUS

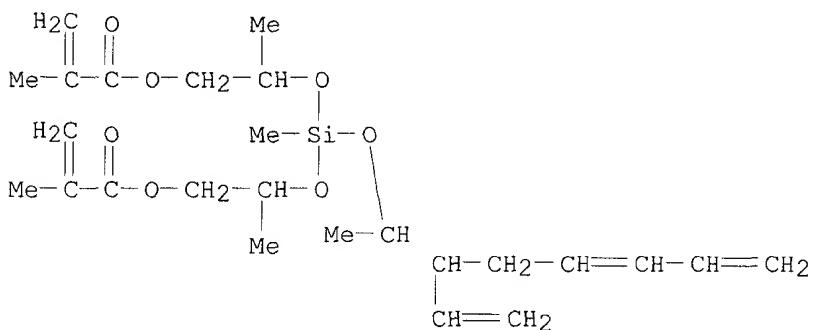
CN Silane, tris[(2-ethenyl-1-methyl-4,6-heptadienyl)oxylmethyl- (9CI) (CA

INDEX NAME)



RN 91297-76-6 HCPLUS

CN 2-Propenoic acid, 2-methyl-, [(2-ethenyl-1-methyl-4,6-heptadienyl)oxy]methylsilylene]bis[oxy(2-methyl-2,1-ethanediyl)] ester (9CI) (CA INDEX NAME)



L35 ANSWER 24 OF 30 HCPLUS COPYRIGHT 2002 ACS

AN 1981:481209 HCPLUS

DN 95:81209

TI Fluoroalkylacyloxsilane

IN Takamizawa, Minoru; Inoue, Yoshio; Yoshioka, Hiroshi

PA Shin-Etsu Chemical Industry Co., Ltd., Japan

SO Ger. Offen., 22 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C07F007-18; C09D003-82

CC 29-6 (Organometallic and Organometalloidal Compounds)

Section cross-reference(s): 37, 42

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3017926	A1	19801120	DE 1980-3017926	19800509
	DE 3017926	C2	19871126		
	JP 55149331	A2	19801120	JP 1979-57362	19790510
	JP 58050664	B4	19831111		
	US 4308212	A	19811229	US 1980-144927	19800429

PRAI JP 1979-57362 19790510

AB Title silanes $X(\text{CF}_2\text{CF}_2)_n\text{CH}_2\text{CH}_2\text{Si}(\text{O}_2\text{CR}_1)_m\text{R}_3-\text{m}$ (I; R = C1-6-hydrocarbyl; R1 = C7-21-hydrocarbyl; X = H, F; m = 1-3; n = 1-4), which, as an additive, improved the surface appearance and properties of both coatings and molded

products from synthetic resins, were prep'd. by the reaction of $X(CF_2CF_2)_nCH_2CH_2SiCl_mR_3-m$ with R_1CO_2H . Thus, $F(CF_2CF_2)_4CH_2CH_2SiCl_3$ treated with $n-C_{21}H_{43}CO_2H$ gave I (R_1 = heneicosyl, X = F, m = 3, n = 4), which improved the appearance, lowered the friction coeff., and increased the scratch resistance of acrylic-epoxide and alkyl resin-melamine resin-TiO₂ coatings to which it was added.

ST fluoroalkylacycloxsilane additive coating molded product; silane acyloxy polyfluoroalkyl

IT Coating materials
(appearance and phys. properties of, (polyfluoroalkyl)(acyloxy)silanes for improvement of)

IT Plastics, molded
RL: PRP (Properties)
(surface properties of, silane additive for improvement of)

IT 78560-31-3P 78560-33-5P 78560-39-1P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, as additive for plastic molding compns.)

IT 78560-36-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, as additive for synthetic resin coating and molding compns.)

IT 78560-32-4P 78560-34-6P 78560-35-7P 78560-37-9P 78560-38-0P
78560-40-4P 78560-41-5P 78560-42-6P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and use of, as additive for synthetic resin coating compns.)

IT 78560-43-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

IT 3102-79-2
RL: RCT (Reactant)
(reaction of, with carboxylic acids)

IT 112-80-1, reactions 124-07-2, reactions
RL: RCT (Reactant)
(reaction of, with chloro(polyfluoroalkyl)silanes)

IT 38436-16-7
RL: RCT (Reactant)
(reaction of, with decanoic acid)

IT 544-63-8, reactions
RL: RCT (Reactant)
(reaction of, with dichloromethyl(polyfluoroalkyl)silane)

IT 334-48-5 28962-27-8
RL: RCT (Reactant)
(reaction of, with dichlorosilane deriv.)

IT 78560-44-8
RL: RCT (Reactant)
(reaction of, with docosanoic acid)

IT 78560-45-9
RL: RCT (Reactant)
(reaction of, with linoleic acid)

IT 1763-30-0 73609-36-6 78560-49-3
RL: RCT (Reactant)
(reaction of, with octanoic acid)

IT 78560-46-0
RL: RCT (Reactant)
(reaction of, with octenoic acid)

IT 78560-48-2
RL: RCT (Reactant)
(reaction of, with steric acid)

IT 78560-47-1
RL: RCT (Reactant)

(reaction of, with tetradecanoic acid)

IT 112-85-6
 RL: RCT (Reactant)
 (reaction of, with trichloro(heptadecafluorodecyl)silane)

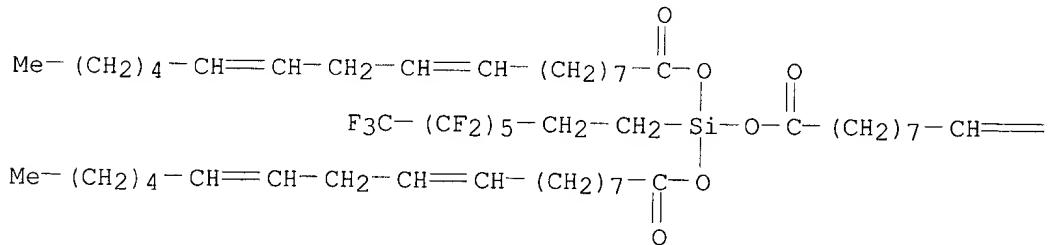
IT 57-11-4, reactions 60-33-3, reactions
 RL: RCT (Reactant)
 (reaction of, with trichloro(polyfluoroalkyl)silane)

IT 78560-36-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and use of, as additive for synthetic resin coating and molding
 compns.)

RN 78560-36-8 HCPLUS

CN 9,12-Octadecadienoic acid (9Z,12Z)-, (3,3,4,4,5,5,6,6,7,7,8,8,8-
 tridecafluoroctyl)silylidene ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L35 ANSWER 25 OF 30 HCPLUS COPYRIGHT 2002 ACS
 AN 1981:158534 HCPLUS
 DN 94:158534
 TI Printing inks
 IN Burstall, Michael Lyle; Podd, Barry David; Lee, Kok Hwee
 PA National Research Development Corp., UK
 SO PCT Int. Appl., 19 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC C09F007-00; C09D011-02; C08G063-68; C07F007-00
 CC 42-12 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8002292	A1	19801030	WO 1980-GB70	19800423
	W: JP, US				
	RW: DE, FR, GB, NL, SE				
	GB 2048914	A	19801217	GB 1980-13387	19800423
	EP 27804	A1	19810506	EP 1980-900721	19800423
	R: DE, FR, GB, NL, SE				

PRAI GB 1979-14028

19790423

AB Lithog. inks with improved deinking properties contain alkyd resins and (semi)drying oils modified with groups readily cleavable under mildly alk. conditions. Thus, 37.5 g linseed oil-trimethylolpropane-phthalic anhydride alkyd and 15 g tetralinoleyl silicate [77093-04-0] are heated to 160-200.degree. over 2 h. This product 4, asphalt varnish 8, carbon black 20, gelling agent 1, and mineral oil 55 g give an ink which is printed on both sides of newsprint. After 1 wk the paper is subjected to flotation deinking and made into handsheets with reflectance (457 nm) 51.2 and very clean appearance, compared with 44.6 and gray and specky, resp., when a conventional linseed oil alkyd ink is used.

ST printing ink hydrolyzable deinking; drying oil hydrolyzable ink; linoleyl silicate drying oil; alkyd ink hydrolyzable deinking

IT Alkyd resins
RL: USES (Uses)
(inks, contg. hydrolyzable drying oils, for improved deinking)

IT Paper
(waste, deinking of, hydrolyzable printing inks for)

IT Oils
RL: USES (Uses)
(drying, fatty alkoxy silanes and fatty alkyl titanates, hydrolyzable, for alkyd printing inks for improved deinking)

IT Alcohols, compounds
RL: USES (Uses)
(fatty, unsatd., reaction products with alkoxy silanes, as hydrolyzable drying oils for alkyd printing inks)

IT Inks
(printing, alkyd, contg. hydrolyzable drying oils for improved deinking)

IT 78-10-4D, reaction products with unsatd. fatty alcs. 78-62-6D, reaction products with unsatd. fatty alcs. 1185-55-3D, reaction products with unsatd. fatty alcs. 77093-04-0 77093-05-1 77093-06-2
RL: USES (Uses)
(drying oils, hydrolyzable, for alkyd printing inks for improved deinking)

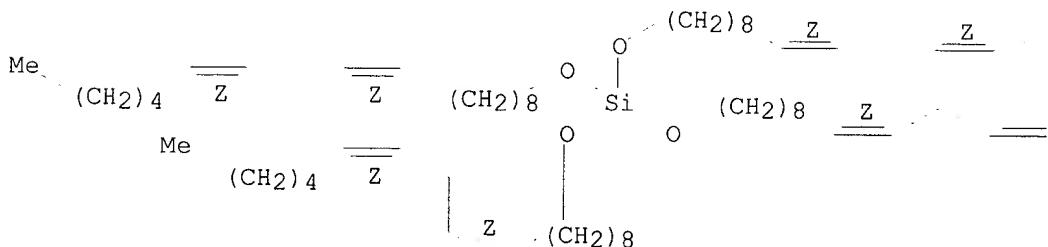
IT 77093-04-0 77093-05-1
RL: USES (Uses)
(drying oils, hydrolyzable, for alkyd printing inks for improved deinking)

RN 77093-04-0 HCPLUS

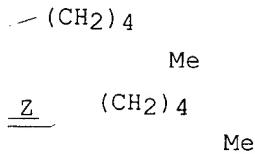
CN Silicic acid (H₄SiO₄), tetra-9,12-octadecadienyl ester, (all-Z)- (9CI)
(CA INDEX NAME)

Double bond geometry as shown.

PAGE 1-A



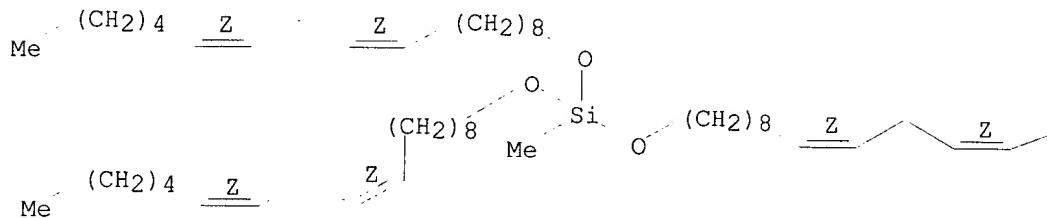
PAGE 1-B



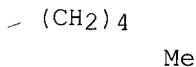
RN 77093-05-1 HCAPLUS
CN Silane, methyltris(9,12-octadecadienyoxy)-, (all-Z)- (9CI) (CA INDEX
NAME)

Double bond geometry as shown.

PAGE 1-A



PAGE 1-B



L35 ANSWER 26 OF 30 HCAPLUS COPYRIGHT 2002 ACS
AN 1980:606317 HCAPLUS
DN 93:206317
TI Polysulfide sealant and caulk compositions
IN Ranney, Maurice W.; Pickwell, Robert J.
PA Union Carbide Corp., USA
SO Can., 27 pp.
CODEN: CAXXA4
DT Patent
LA English
IC B32B027-06
CC 42-11 (Coatings, Inks, and Related Products)
FAN CNT 2

PATENT NO.		KIND	DATE	APPLICATION NO.	DATE
PI	CA 1071038	A1	19800205	CA 1976-247370	19760308
	US 4020218	A	19770426	US 1975-562779	19750327
PRAT	US 1975-562779		19750327		

AB The adhesion of the title compns. to solid, inorg. substrates is improved by the use of RSiX_3 [R = (mercapto)norbornenyl, bicyclopentenyl; X = Cl, alkoxy, AcO] or their hydrolyzates or condensates as couplers. Thus, polysulfide sealants contg. 2% trimethoxy-2-norbornen-5-ylsilane [

7538-46-7] applied to glass or Al, cured 3 wk at room temp. and 100% relative humidity, and immersed 1-4 wk in H₂O undergo only cohesive failure, compared with complete adhesive failure in the absence of silane.

ST coupler sealant polysulfide; silane coupler sealant; norbornenylsilane
 coupler sealant

IT Coupling agents
 (norbornenylsilanes, for polysulfide sealants)

IT Sealing compositions
 (polysulfides, couplers for, norbornenylsilanes as)

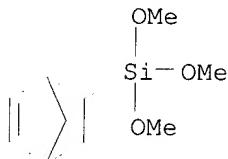
IT Polysulfides
 RL: USES (Uses)
 (sealants, couplers for, bicycloalkenylsilanes as)

IT 7538-46-7 62749-74-0 68245-22-7 68323-30-8
 RL: USES (Uses)
 (couplers, for polysulfide sealants)

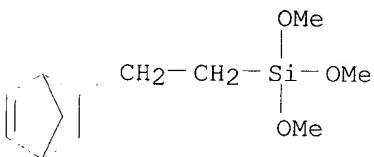
IT 7538-46-7 68323-30-8
 RL: USES (Uses)
 (couplers, for polysulfide sealants)

RN 7538-46-7 HCPLUS

CN Silane, bicyclo[2.2.1]hept-5-en-2-yltrimethoxy- (9CI) (CA INDEX NAME)



RN 68323-30-8 HCPLUS
 CN Silane, (2-bicyclo[2.2.1]hept-5-en-2-ylethyl)trimethoxy- (9CI) (CA INDEX NAME)

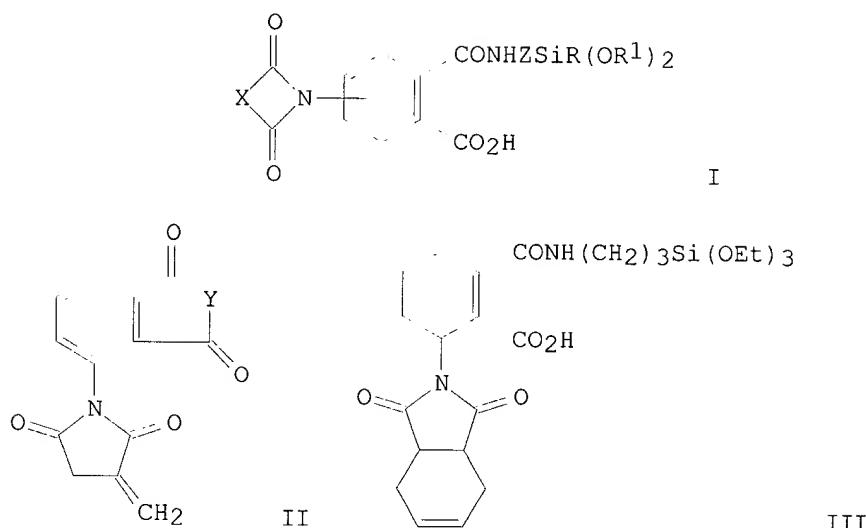


L35 ANSWER 27 OF 30 HCPLUS COPYRIGHT 2002 ACS
 AN 1979:457176 HCPLUS
 DN 91:57176
 TI Silicon-modified imidylphthalic acid derivatives
 IN Darms, Roland; Wyler, Siegfried; Greber, Gerd
 PA Ciba-Geigy A.-G., Switz.
 SO Ger. Offen., 25 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC C07D227-04; C07F007-18
 CC 29-6 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 36, 37, 42
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI	DE 2838844	A1	19790315	DE 1978-2838844	19780906
	DE 2838844	C2	19871008		
	CH 630089	A	19820528	CH 1977-11068	19770909
	US 4210588	A	19800701	US 1978-938169	19780830
	DE 2858710	C2	19880414	DE 1978-2858710	19780906
	GB 2004290	A	19790328	GB 1978-35967	19780907
	GB 2004290	B2	19820811		
	CA 1111042	A1	19811020	CA 1978-310794	19780907
	FR 2402661	A1	19790406	FR 1978-25827	19780908
	FR 2402661	B1	19840720		
	JP 54048755	A2	19790417	JP 1978-111238	19780909
	JP 61054033	B4	19861120		
	GB 2029404	A	19800319	GB 1979-7338	19790301
	GB 2029404	B2	19830525		
	CH 632273	A	19820930	CH 1981-6506	19811012
PRAI	CH 1977-11068		19770909		
	GB 1978-35967		19780907		

GI



AB Title compds. I and their imides [X = CH:CH, CMe:CMe, cycloalkenediyl, bicycloalkenediyl, etc.; R = Me, Ph, OR₁, R₁ = C₁₋₆ alkyl, Ph; Z = (CH₂)_x, C₆H₄(CH₂)_{x-p}, x = 2-4] were prep'd. Thus, 0.05 mol II (Y = O) and 0.05 mol p-H₂NC₆H₄(CH₂)₃SiMe(OPr)₂ was kept 2 h in anhyd. AcNMe₂ at 20-5.degree. and cyclized by heating at 120-30.degree. in toluene to give II [Y = NC₆H₄(CH₂)₃SiMe(OPr)₂]. Among the 4 other compds. similarly prep'd. was III. The compds. prep'd. were used as adhesives to attach copper coatings to fiberglass.

ST maleimidylphthalimide silylalkyl; phthalimide maleimidyl silylalkyl; silylalkyl phthalimide; adhesive polymer maleimidylsilylalkylphthalimide; copper coating adhesive fiberglass

IT Adhesives

(maleimidyl(silylalkyl)phthalimides, for copper on fiberglass)

IT 18395-59-0

RL: RCT (Reactant)

(hydrosilylation of allylimides by)

IT 56896-86-7
 RL: RCT (Reactant)
 (imidation of, with allylamine)

IT 56896-78-7 56896-79-8 56896-80-1
 RL: RCT (Reactant)
 (imidation of, with amines)

IT 107-11-9 919-30-2 55081-09-9 70767-04-3
 RL: RCT (Reactant)
 (imidation of, with phthalic anhydride)

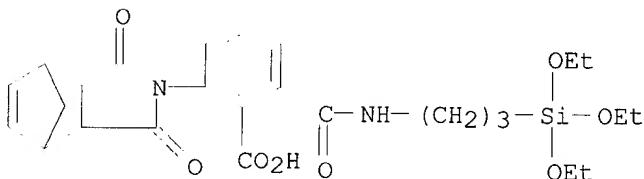
IT 70767-01-0P 70767-02-1P 70770-08-0P 70770-09-1P 70770-10-4P
70901-27-8P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and application as adhesives for metals and polymers)

IT 70767-03-2P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and hydrosilylation of)

IT **70901-27-8P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. and application as adhesives for metals and polymers)

RN 70901-27-8 HCPLUS

CN Benzoic acid, 2-(1,3,3a,4,7,7a-hexahydro-1,3-dioxo-4,7-methano-2H-isoindol-2-yl)-6-[[3-(triethoxysilyl)propyl]amino]carbonyl- (9CI) (CA INDEX NAME)



L35 ANSWER 28 OF 30 HCPLUS COPYRIGHT 2002 ACS

AN 1977:424957 HCPLUS

DN 87:24957

TI Polysulfide sealant and caulk compositions

IN Ranney, Maurice W.; Pickwell, Robert J.

PA Union Carbide Corp., USA

SO U.S., 7 pp.

CODEN: USXXAM

DT Patent

LA English

IC B32B027-06

NCL 428447000

CC 42-11 (Coatings, Inks, and Related Products)

FAN.CNT 2

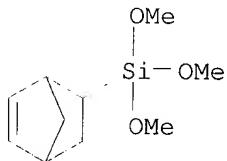
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4020218	A	19770426	US 1975-562779	19750327
	CA 1071038	A1	19800205	CA 1976-247370	19760308

PRAI US 1975-562779 19750327

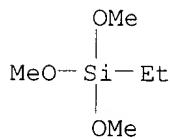
AB The bonding of polysulfide sealants to inorg. substrates, esp. metal, ceramic, concrete, or glass, was improved by the use of bicyclopentenyl-, mercaptonorbornyl-, or norbornenyl-contg. silane adhesion promoters. Thus, 1 g norbornenyltrimethoxysilane (I) [7538-46-7] was blended thoroughly into 50 g of each of black and gray colored com. polysulfide-based sealants at <150 ppm moisture in a glove box, portions

of each of the mixts. were applied to both glass and Al test panels, and the panels were cured overnight on the bench top, followed by 3 weeks curing at room temp. and 100% relative humidity. On testing of each sealant, there was no adhesive failure, only cohesive failure of the well-cured sealant, as compared with complete adhesive failure with the same sealants not contg. I.

ST silane adhesion promoter polysulfide; polysulfide rubber sealant adhesion
 IT Caulking compositions
 Sealing compositions
 (polysulfides, adhesion promoters for, silanes as)
 IT Rubber, polysulfide
 RL: USES (Uses)
 (sealining compns. adhesion promoters for, silanes as)
 IT Adhesion
 (promoters, silanes as, for polysulfide caulking and sealing compns.)
 IT Bicyclo[2.2.1]heptane-2-thiol, 6-(trimethoxysilyl)-
 RL: USES (Uses)
 (adhesion promoters, for polysulfide caulking and sealing compns.)
 IT 7538-46-7 63103-84-4 63103-85-5 63147-31-9
 63161-39-7
 RL: USES (Uses)
 (adhesion promoters, for polysulfide caulking and sealing compns.)
 IT 7538-46-7 63103-84-4
 RL: USES (Uses)
 (adhesion promoters, for polysulfide caulking and sealing compns.)
 RN 7538-46-7 HCAPLUS
 CN Silane, bicyclo[2.2.1]hept-5-en-2-yltrimethoxy- (9CI) (CA INDEX NAME)



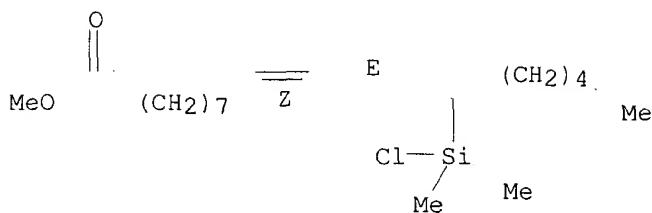
RN 63103-84-4 HCAPLUS
 CN Silane, (bicyclo[2.2.1]hept-5-en-2-ylethyl)trimethoxy- (9CI) (CA INDEX NAME)



L35 ANSWER 29 OF 30 HCAPLUS COPYRIGHT 2002 ACS
 AN 1976:464862 HCAPLUS
 DN 85:64862

TI Hydrosilylation of methyl eleostearate
 AU Thames, S. F.; Bufkin, B. G.; Jen, S. J.; Evans, J. M.; Long, J. S.
 CS Dep. Polym. Sci., Univ. South. Mississippi, Hattiesburg, Miss., USA
 SO J. Coat Technol. (1976), 48(612), 46-50
 CODEN: JCTEDL
 DT Journal
 LA English
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 29
 AB The hydrosilylation of Me .alpha.-eleostearate (I) [4175-47-7] gives Me 13-dimethylchlorosilyl-9-cis-11-trans-octadecadienoate [59846-07-0] (b.p. 128.degree./0.02 mm), 13-dimethylsilyl-9-cis-11-trans-octadecadienol [59846-08-1] (b.p. 121.degree./0.03 mm), and some dihydrosilylated product that would not distill nor recrystallize, whereas the hydrosilylation of Me .beta.-eleostearate (II) gives Me 13-dimethylchlorosilyl-9-trans-11-trans-octadecadienoate [59846-09-2] (b.p. 140.5.degree./0.03 mm) and 13-dimethylsilyl-9-trans-11-trans-octadecadienol [59846-10-5] (b.p. 130.degree./0.03 mm). The monohydrosilylation proceeds by 1,2 addn. to the conjugated triene system of I and apparently occurs on the 13,14 double bond with the Si atom attached to C-13. The ir and uv spectroscopies, elemental anal., and chem. modification of the hydrosilylated substrates do not allow differentiation between 1,2 addn. to the 9,10 double bond, 1,2 addn. to the 13,14 double bond, and 1,6 addn. to the conjugated triene in II. However, the double bonds remaining are apparently conjugated with the Si atom located in an allylic position. Hydrosilylation can be used for the prodn. of water reducible coatings, which possess properties superior to similar non-Si contg. polyesters, and for the prodn. of some novel electrodepositable polymers.
 ST hydrosilylation methyl eleostearate; silicon organo reducible coating; chlorosilyloctadecadienoate coating; silyloctadecadienol coating
 IT Hydrosilylation
 (of methyl eleostearates, for coatings)
 IT Coating materials
 (polyesters, contg. silicon)
 IT 59846-07-0 59846-08-1 59846-09-2
 59846-10-5
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, from hydrosilylation of methyl eleostearate)
 IT 4175-47-7
 RL: RCT (Reactant)
 (hydrosilylation of)
 IT 59846-07-0 59846-08-1 59846-09-2
 59846-10-5
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, from hydrosilylation of methyl eleostearate)
 RN 59846-07-0 HCAPLUS
 CN 9,11-Octadecadienoic acid, 13-(chlorodimethylsilyl)-, methyl ester, (E,Z)- (9CI) (CA INDEX NAME)

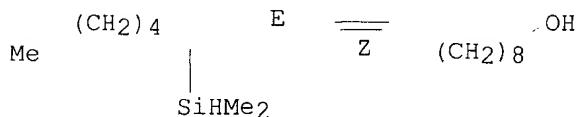
Double bond geometry as shown.



RN 59846-08-1 HCAPLUS

CN 9,11-Octadecadien-1-ol, 13-(dimethylsilyl)-, (E,Z)- (9CI) (CA INDEX NAME)

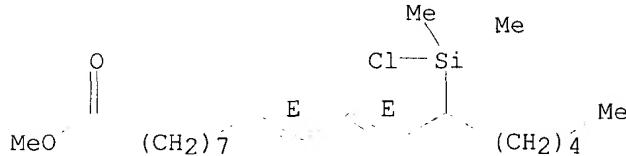
Double bond geometry as shown.



RN 59846-09-2 HCAPLUS

CN 9,11-Octadecadienoic acid, 13-(chlorodimethylsilyl)-, methyl ester, (E,E)-
(9CI) (CA INDEX NAME)

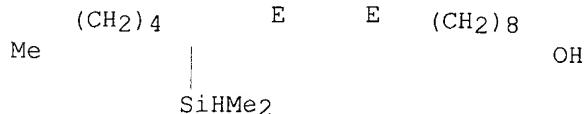
Double bond geometry as shown.



RN 59846-10-5 HCAPLUS

CN 9,11-Octadecadien-1-ol, 13-(dimethylsilyl)-, (E,E)- (9CI) (CA INDEX NAME)

Double bond geometry as shown.



L35 ANSWER 30 OF 30 HCPLUS COPYRIGHT 2002 ACS

AN 1973:73778 HCAPLUS

DN 78:73778

TI Aliphatically unsaturated organopolysiloxanes

IN Holub, Fred F.; Berger, Abe; Hardman, Bruce B.; Urkevich, Michael P.

IN Herkules, Fred F., Being
PA General Electric Co.

GENERAL STATE
U.S., 4 pp.

55 U.S.,
COPEN:

DT Patent

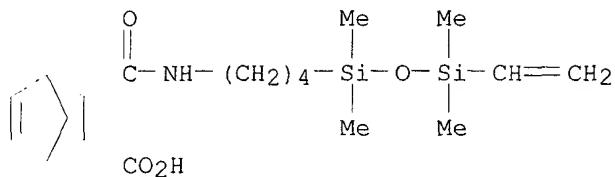
DI Father
LA English

EA ENGLISH
IC C07F

CC 42-10 (Coatings, Inks, and Related Products)

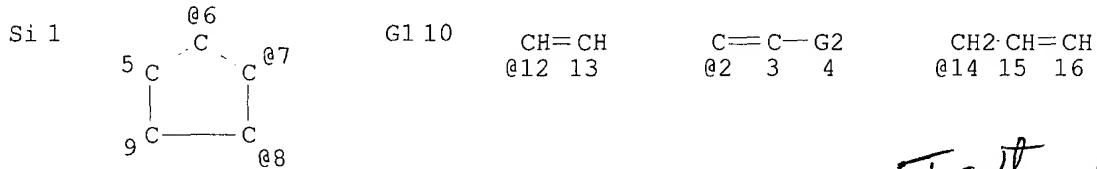
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3701795	A	19721031	US 1971-126291	19710319
AB	CH ₂ :CHSi(Me ₂)OSi(Me ₂)(CH ₂) ₄ NRCOXCO ₂ R (I, R = H or Me ₃ Si, X = CH:CH, cyclohexene-1,2-diyl, or 3,6-endomethylene-4-cyclohexene-1,2-diyl), useful as adherent coating on Al and glass were prepd. For example, an equimolar mixt. of 1,3-bis(4-aminobutyl)tetramethyldisiloxane and 1,3-divinyltetramethyldisiloxane was heated at 90.deg. for 2-3 hr in the presence of KOH to give 60% 1-(4-aminobutyl)-3-vinyltetramethyldisiloxane [37757-59-8] which was treated with an equimolar amt. of maleic anhydride in DMF at room temp. for 6 hr to give a siloxane (I, R = H, X = CH:CH) (II) [37757-60-1]; treatment of II with Me ₃ SiCl in the presence of Et ₃ N gave a silane deriv. (I, R = Me ₃ Si, X = CH:CH) [37757-61-2]. A mixt. of II 20, DMF 80, and dicumyl peroxide 0.4 part was cast on an Al plate, dried at 130.deg. for 1 hr, and baked at 200.deg. for 1 hr to give an adherent coating with good release properties.				
ST	vinylsiloxane coating				
IT	Coating materials (vinyldisiloxanephthalic acid deriv. polymers, on aluminum and glass)				
IT	40663-99-8 RL: TEM (Technical or engineered material use); USES (Uses) (coatings, on glass)				
IT	40872-66-0 RL: TEM (Technical or engineered material use); USES (Uses) (coatings, on glass, release)				
IT	37757-61-2P 40664-01-5P RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)				
IT	85-43-8 129-64-6 RL: RCT (Reactant) (reaction of, with (aminobutyl)vinyltetramethyldisiloxane)				
IT	75-77-4 RL: RCT (Reactant) (reaction of, with (vinyldimethylsiloxydimethylsilylbutyl)maleamic acid)				
IT	37757-59-8 RL: RCT (Reactant) (reaction of, with acid anhydrides)				
IT	2627-95-4 RL: RCT (Reactant) (reaction of, with bis(aminobutyl)tetramethyldisiloxane)				
IT	3663-42-1 RL: RCT (Reactant) (reaction of, with bis(vinyl)tetramethyldisiloxane)				
IT	37757-60-1 RL: RCT (Reactant) (reaction of, with trimethylchlorosilane)				
IT	108-31-6, reactions RL: RCT (Reactant) (with (aminobutyl)vinyltetramethyldisiloxane)				
IT	40664-01-5P RL: SPN (Synthetic preparation); PREP (Preparation) (prepn. of)				
RN	40664-01-5 HCAPLUS				
CN	Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, 3-[[[4-(3-ethenyl-1,1,3,3-tetramethyldisiloxanyl)butyl]amino]carbonyl]- (9CI) (CA INDEX NAME)				



=> D QUE

L14 48 SEA FILE=HCAPLUS ABB=ON ?SILAN? AND (AUTOXID? OR AUTOXID?)
 L15 8 SEA FILE=HCAPLUS ABB=ON ?SILAN?(4A) (AUTOXID? OR AUTOXID?)
 L16 2 SEA FILE=HCAPLUS ABB=ON L14 AND COATING?/SC, SX
 L17 1 SEA FILE=HCAPLUS ABB=ON L14 AND WEAR?
 L18 9 SEA FILE=HCAPLUS ABB=ON (L15 OR L16 OR L17)
 L27 STR



Text search

VAR G1=2/6/7/8

VAR G2=12/14

NODE ATTRIBUTES:

CONNECT IS M3 RC AT 1
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L29 21558 SEA FILE=REGISTRY SSS FUL L27
 L30 9629 SEA FILE=HCAPLUS ABB=ON L29
 L31 11 SEA FILE=HCAPLUS ABB=ON L30 AND (AUTOXID? OR AUTOXID?)
 L32 30 SEA FILE=HCAPLUS ABB=ON L30 AND COATING?/SC, SX
 L33 1 SEA FILE=HCAPLUS ABB=ON L31 AND COAT?/SC, SX, AB, BI
 L34 1 SEA FILE=HCAPLUS ABB=ON L31 AND WEAR?
 L35 30 SEA FILE=HCAPLUS ABB=ON L32 OR L33 OR L34
 L36 8 SEA FILE=HCAPLUS ABB=ON (L18 OR L35) NOT L35

=> D L36 ALL 1-8

L36 ANSWER 1 OF 8 HCAPLUS COPYRIGHT 2002 ACS
 AN 1999:614050 HCAPLUS
 DN 131:244651
 TI Nonaqueous coating compositions containing oxidatively drying alkyd resins and photoinitiators
 IN Van Den Berg, Keimpe Jan; Klinkenberg, Huig; Noomen, Arie
 PA Akzo Nobel N.V., Neth.
 SO PCT Int. Appl., 34 pp.
 CODEN: PIXXD2
 DT Patent

LA English
 IC ICM C09D167-08
 ICS C08G063-48
 CC 42-8 (Coatings, Inks, and Related Products)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9947617	A1	19990923	WO 1999-EP1136	19990223
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2323795	AA	19990923	CA 1999-2323795	19990223
	AU 9930295	A1	19991011	AU 1999-30295	19990223
	BR 9908728	A	20001121	BR 1999-8728	19990223
	EP 1062288	A1	20001227	EP 1999-911694	19990223
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, LT, LV, FI				
	NO 2000004539	A	20001110	NO 2000-4539	20000912
PRAI	EP 1998-200801	A	19980313		
	WO 1999-EP1136	W	19990223		
AB	The coating compn. comprises an oxidatively drying alkyd resin modified with .gtoreq.1 vinyl ether, acetal and alkoxysilane , an acid or latent acid catalyst, and a photo-initiator. Thus, 50.3 parts alkoxysilane -modified alkyd (Mn 1774) prep'd. from ricinenic fatty acid (Nouracid DE 554) pentaerythritol, maleic acid, di-Et malonate and 3-aminopropyl triethoxysilane was mixed with Setal 294SK94 50, di-Bu phosphate 2.6, bis(2,6-dimethylbenzoyl)-2,4,4-trimethylpentyl phosphine oxide 5.2 n-butanol 2.5 and methoxypropyl acetate 2.5 parts, applied to a glass panel, and air-dried, showing fast curing and sufficient film strength after 1 wk.				
ST	acid crosslinking catalyst alkoxysilane alkyd coating; acetal alkyd coating autoxidn ; vinyl ether alkyl coating				
IT	Alkyd resins RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (Setal 294SK94; nonaq. coating compns. contg. oxidatively drying alkyd resins and photoinitiators)				
IT	Coating materials (air-drying; nonaq. coating compns. contg. oxidatively drying alkyd resins and photoinitiators)				
IT	Crosslinking catalysts (nonaq. coating compns. contg. oxidatively drying alkyd resins and photoinitiators)				
IT	Coating materials (nonaq.; nonaq. coating compns. contg. oxidatively drying alkyd resins and photoinitiators)				
IT	75-75-2, Methanesulfonic acid 76-03-9, Trichloroacetic acid, uses 76-05-1, uses 104-15-4, uses 107-66-4, Dibutyl phosphate 27176-87-0, Dodecyl benzenesulfonic acid RL: CAT (Catalyst use); USES (Uses) (catalyst; nonaq. coating compns. contg. oxidatively drying alkyd resins and photoinitiators)				
IT	105-53-3DP, Diethyl malonate, reaction products with hydroxy-contg. alkyds, and alkoxysilanes or acetals or vinyl ethers				

919-30-2DP, 3-**Aminopropyltriethoxysilane**, reaction products with alkyds, and malonates or diisocyanates 4098-71-9DP, IPDI, reaction products with hydroxy-contg. alkyds, and **alkoxysilanes** 17832-28-9DP, 4-Hydroxybutyl vinyl ether, reaction products with alkyds, and malonates 19060-15-2DP, 4-Aminobutyraldehyde dimethyl acetal, reaction products with alkyds, and malonates 244170-36-3DP, Maleic acid-pentaerythritol copolymer ricininate, reaction products with di-Et malonate or diisocyanates, and **alkoxysilanes** or acetals or vinyl ethers

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(nonaq. coating compns. contg. oxidatively drying alkyd resins and photoinitiators)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Davidson; US 3825428 A 1974 HCPLUS
- (2) Green; US 5286835 A 1994 HCPLUS
- (3) Ikeda; US 3373160 A 1968 HCPLUS
- (4) Imperial Chemical Industries; EP 0009356 A 1980 HCPLUS
- (5) Vianova Kunsthärz Ag; GB 1423408 A 1976 HCPLUS

L36 ANSWER 2 OF 8 HCPLUS COPYRIGHT 2002 ACS

AN 1998:269282 HCPLUS
DN 128:257778

TI **Autoxidation of Poly(hydrosilane)s**

AU Chatgilialoglu, Chryssostomos; Guerrini, Andrea; Lucarini, Marco; Pedulli, Gian Franco; Carrozza, Primo; Da Roit, Giovanni; Borzatta, Valerio; Lucchini, Vittorio

CS I.Co.C.E.A. Consiglio Nazionale delle Ricerche, Bologna, 40129, Italy

SO Organometallics (1998), 17(11), 2169-2176
CODEN: ORGND7; ISSN: 0276-7333

PB American Chemical Society

DT Journal

LA English

CC 35-8 (Chemistry of Synthetic High Polymers)

AB Poly(hydrosilane)s obtained by dehydrocoupling of the corresponding RSiH_3 were air-sensitive. Anal. based on GPC, IR, and heterocorrelated ^1H - ^{29}Si NMR indicate the formation of some siloxane-type structures on the polymer backbone. Kinetic studies carried out by EPR spectroscopy using fusinite as a paramagnetic probe of the oxygen concn. allowed the oxidizability of some polysilanes to be obtained. Oxidizability values of 1.2 .times. 10-2 and 1.8 .times. 10-2 M-1/2 s-1/2 were found for poly(n-hexylsilane) and poly(phenylsilane), resp. Model studies on the oxidn. of $(\text{Me}_3\text{Si})_2\text{Si}(\text{H})\text{Me}$ with a mixt. of 16O_2 and 18O_2 suggest that the main reaction path proceeds via a free-radical chain mechanism and involves either two or three consecutive, unimol. steps. Poly(hydrosilane)s react with nitroxides (TEMPO) under free-radical conditions and in the absence of mol. oxygen to give the corresponding amine in good yields.

ST **autoxidn polyhydrosilane polysilane**
polyphenylsilane polyhexylsilane

IT **Autoxidation**
(autoxidn. of poly(hydrosilane)s)

IT **Polysilanes**

RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(autoxidn. of poly(hydrosilane)s)

IT 1873-88-7, Bis(trimethylsilyloxy)methylsilane

RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(autoxidn. of poly(hydrosilane)s)

IT 80731-82-4, Poly(phenylsilane) 95584-35-3, Poly(

hexylsilane), sru 95584-36-4, Poly(phenylsilane)
102742-23-4, Poly(hexylsilane)
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC
(Process); RACT (Reactant or reagent)
(autoxidn. of poly(hydrosilane)s)
IT 118467-00-8, Bis(trimethylsilyl)methylsilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(model compd.; autoxidn. of poly(hydrosilane)s)
IT 13408-29-2, Nitroxide
RL: RCT (Reactant); RACT (Reactant or reagent)
(poly(hydrosilane)s reaction with nitroxide)

L36 ANSWER 3 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1994:435721 HCAPLUS
DN 121:35721
TI Thermolysis and autoxidation of selected Group IVA organometallic
compounds
AU Podesta, David Mark
CS Univ. Nottingham, Nottingham, UK
SO (1991) 220 pp. Avail.: Univ. Microfilms Int., Order No. BRD-96357
From: Diss. Abstr. Int. B 1992, 53(3), 1323
DT Dissertation
LA English
CC 29-8 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 22
AB Unavailable
ST thermolysis Group IVA organometallic kinetics mechanism; autoxidn Group
IV A organometallic kinetics mechanism; Group IVA organometallic
thermolysis autoxidn kinetics
IT Kinetics of thermal decomposition
(of selected Group IVA organometallic compds.)
IT Oxidation, aut-
Thermal decomposition
(of selected Group IVA organometallic compds., mechanism of)
IT Kinetics of oxidation
(aut-, of selected Group IVA organometallic compds.)
IT Group IVA element compounds
RL: RCT (Reactant)
(complexes, thermolysis and autoxidn. of organometallic, kinetics and
mechanism of)
IT 75-76-3, Tetramethylsilane
RL: RCT (Reactant)
(autoxidn. of, kinetics and mechanism of)
IT 1449-63-4, Trimethylgermane
RL: RCT (Reactant)
(thermolysis and autoxidn. of, kinetics and mechanism of)
IT 1631-73-8, Trimethyltin hydride 62359-30-2, Trimethyltin deuteride
92063-61-1
RL: RCT (Reactant)
(thermolysis of, kinetics and mechanism of)

L36 ANSWER 4 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1992:634469 HCAPLUS
DN 117:234469
TI Immobilized hemin catalyst in oxidation processes, III. Oxidation of
cysteine
AU Zub, Yu. L.; Yakubovich, T. N.; Potapov, G. P.
CS Inst. Surf. Chem., Kiev, 252650, USSR
SO Stud. Surf. Sci. Catal. (1992), 72(New Dev. Sel. Oxid. Heterog. Catal.),
461-7

CODEN: SSCTDM; ISSN: 0167-2991
 DT Journal
 LA English
 CC 34-2 (Amino Acids, Peptides, and Proteins)
 Section cross-reference(s): 6, 22, 26, 29, 35
 AB 3-Aminopropylpolysiloxane prep'd. by the hydrolytic polycondensation of Si(OEt)₄ and (EtO)₃Si(CH₂)₃NH₂ is a space-crosslinked polymer with functional amino groups on its surface. Hemin [a complex of Fe(III) with protoporphyrin IX] was attached to the new matrix with participation of the latter. The resulting catalyst had a high efficiency in the reaction of cysteine with O₂.
 ST immobilized hemin catalyst autoxidn cysteine
 IT Polymer-supported reagents
 (hemin bound to hydrolytic polycondensation product of aminopropyl(triethoxy)silane with **tetraethoxysilane** as catalyst for **autoxidn.** of cysteine)
 IT Kinetics of oxidation
 (aut-, of cysteine, over polymer bound hemin catalyst)
 IT Oxidation catalysts
 (aut-, polymer bound hemin catalyst, for cysteine, kinetics with)
 IT 52-90-4, Cysteine, reactions
 RL: RCT (Reactant)
 (autoxidn. of, kinetics with polymer bound hemin catalyst for)
 IT 78-10-4D, Tetraethoxysilane, hemin bound to hydrolytic polycondensation product of 3-aminopropyl(triethoxy)silane with 919-30-2D, 3-Aminopropyl(triethoxy)silane, hemin bound to hydrolytic polycondensation product of **tetraethoxysilane** with 16009-13-5D, Hemin, bound to hydrolytic polycondensation product of 3-aminopropyl(triethoxy)silane with **tetraethoxysilane**
 RL: CAT (Catalyst use); USES (Uses)
 (catalyst, for **autoxidn.** of cysteine, kinetics and efficiency with)

L36 ANSWER 5 OF 8 HCAPLUS COPYRIGHT 2002 ACS
 AN 1992:174231 HCAPLUS
 DN 116:174231
 TI **Autoxidation** of tris(trimethylsilyl)silane
 AU Chatgilialoglu, C.; Guarini, A.; Guerrini, A.; Seconi, G.
 CS Consiglio Naz. Ric., Ozzano Emilia, 40064, Italy
 SO J. Org. Chem. (1992), 57(8), 2207-8
 CODEN: JOCEAH; ISSN: 0022-3263
 DT Journal
 LA English
 CC 29-6 (Organometallic and Organometalloidal Compounds)
 Section cross-reference(s): 22
 OS CASREACT 116:174231
 AB Tris(trimethylsilyl)silane reacts spontaneously at ambient temp. with mol. oxygen to form (Me₃SiO)₂Si(H)SiMe₃ in >95% yield. The reaction proceeds via a free radical chain mechanism and probably involves three consecutive unimol. processes which are unknown in the literature.
 ST **autoxidn silylsilane**; siloxysilane
 IT Oxidation, aut-
 (of tris(trimethylsilyl)silane, free-radical chain mechanism for)
 IT 1873-77-4, Tris(trimethylsilyl)silane
 RL: RCT (Reactant)
 (**autoxidn.** of)
 IT 139347-50-5P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L36 ANSWER 6 OF 8 HCPLUS COPYRIGHT 2002 ACS
AN 1983:54006 HCPLUS
DN 98:54006
TI Effect of trimethoxysilane-solvent interactions on reactivity of the silicon-hydrogen bond in the presence of silver perchlorate
AU Marciniec, B.; Gulinska, H.; Gulinski, J.
CS Dep. Phys. Inorg. Chem., A. Mickiewicz Univ., Poznan, 60-780, Pol.
SO Z. Phys. Chem. (Wiesbaden) (1982), 130(2), 155-65
CODEN: ZPCFAX; ISSN: 0044-3336
DT Journal
LA English
CC 29-6 (Organometallic and Organometalloidal Compounds)
Section cross-reference(s): 22
AB The solvent effect modifies the electrophilicity of AgClO₄ and the polarity of the Si-H bond in (MeO)₃SiH (I) which results in a set of complex reactions which includes competitive autoxidative oxygenation and dehydrogenation of I accompanied by Ag pptn. The reaction mechanisms are discussed.
ST solvent effect methoxysilane silver perchlorate; redox methoxysilane silver perchlorate; oxidn methoxysilane silver perchlorate; autoxidn methoxysilane; oxygenation methoxysilane; dehydrogenation methoxysilane; kinetics dehydrogenation methoxysilane
IT Electrophilicity
(of silver perchlorate, solvent effect on)
IT Dehydrogenation
Oxidation
Oxidation, aut-
(of trimethoxysilane in presence of silver perchlorate, mechanism of)
IT Kinetics of dehydrogenation
Kinetics of oxidation
Kinetics of redox reaction
Redox reaction
(of trimethoxysilane with silver perchlorate, solvent effect on)
IT Solvent effect
(on reaction of silver perchlorate with trimethoxysilane)
IT Kinetics of oxidation
(aut-, of trimethoxysilane with silver perchlorate, solvent effect on)
IT Bond
(hydrogen-silicon, in trimethoxysilane, solvent effect on polarity of)
IT 2487-90-3
RL: RCT (Reactant)
(reaction of, with silver perchlorate, solvent effect on)
IT 7783-93-9
RL: RCT (Reactant)
(reaction of, with trimethoxysilane, solvent effect on)

L36 ANSWER 7 OF 8 HCPLUS COPYRIGHT 2002 ACS
AN 1969:421353 HCPLUS
DN 71:21353
TI Isotope effects in autoxidation. VI. Autoxidation of phenyldimethylsilane and phenyldimethylsilane-.alpha.-d
AU Rummel, Siegbert; Huebner, Heinrich
CS Deut. Akad. Wiss. Berlin, Leipzig, Ger.
SO Z. Chem. (1969), 9(4), 150-1
CODEN: ZECEAL
DT Journal
LA German
CC 22 (Physical Organic Chemistry)
AB The isotope effect (KH/KD) of the autoxidn. of the title compds. was 1.19. The low value is explained by the structure of the intermediate.

ST **silanes autoxidn** isotope effects; **autoxidn**
silanes isotope effects; isotope effects **autoxidn**
silanes; labeled **silanes** deuterium **autoxidn**;
deuterium labeled **silanes** **autoxidn**

IT Oxidation
(aut-, of dimethylphenylsilane, isotopic effect of deuterium in)

IT Isotopic effects
(on **autoxidn.** of **dimethylphenylsilane**, by
deuterium)

IT 766-77-8
RL: RCT (Reactant)
(isotopic effect of, isotopic effect of deuterium in)

IT 7782-39-0, properties
RL: PRP (Properties)
(isotopic effect of, in **autoxidn.** of
diphenylmethylsilane)

L36 ANSWER 8 OF 8 HCAPLUS COPYRIGHT 2002 ACS
AN 1955:64584 HCAPLUS
DN 49:64584
OREF 49:12340f-i,12341a-f
TI Substituted **phenylsilanes**. I. The **autoxidation** of
.omicron.-, m-, and p-trimethylsilylethylbenzene
AU Severson, Roland G.; Rosskopf, Robert J.
CS Univ. of North Dakota, Grand Forks
SO J. Am. Chem. Soc. (1954), 76, 4552-4
DT Journal
LA Unavailable
CC 10 (Organic Chemistry)
AB The 3 isomeric $\text{Me}_3\text{SiC}_6\text{H}_4\text{Et}$ (I) have been prepd. and their oxidation with O
has been studied. This oxidation carried out at 200-20.degree. in the
presence of CrO_3 and CaCO_3 , gave moderate yields of the 3 isomeric
 $\text{Me}_3\text{SiC}_6\text{H}_4\text{Ac}$ (II) as well as the corresponding $\text{Me}_3\text{SiC}_6\text{H}_4\text{CO}_2\text{H}$ (III).
.omicron.-BrC₆H₄Et (175 g.) in 300 cc. dry Et₂O added dropwise with
stirring to 13.5 g. Li in 400 cc. dry Et₂O at such a rate that the mixt.
refluxed gently, the resulting soln. of .omicron.-isomer of EtC₆H₄Li (IV)
cooled to room temp. and treated slowly with 112 g. Me_3SiOEt (V) in 200
cc. Et₂O, the mixt. refluxed 1 hr., decompd. with H₂O followed by dil.
HCl, the Et₂O layer washed with H₂O, dried over Na_2SO_4 , and evapd., and
the residue distd. gave 92.3 g. .omicron.-I, b. 210-11.degree., n_{20D}
1.5030, d₂₀ 0.8870; MRD 59.43. m-IV and V (0.28 mole each) gave in the
same manner 38 g. m-I, b. 202.degree., n_{20D} 1.4914, d₂₀ 0.8672, MRD 59.59.
p-IV and V gave similarly 117 g. p-I, b. 207-8.5.degree., n_{20D} 1.4930, d₂₀
0.8672, MRD 59.65. p-I (35.6 g.), 0.5 g. CrO_3 , and 2 g. CaCO_3 treated 6
hrs. at 200-14.degree. with dry O at such a rate that the liquid refluxed
well above the side-arm of the Dean-Stark trap, the exit gas passed
through a CO₂ trap which condensed only negligible amts. of org. material
/about 2.5 cc. H₂O was collected), the mixt. filtered through a bed of
Celite, the filter residue washed with Et₂O, the combined filtrate and
washings extd. with 10% aq. Na_2CO_3 , the basic aq. soln. acidified with
dil. HCl and extd. with Et₂O, the ext. dried with Drierite and evapd. on
the steam bath, and the crude residual p-III (3.4 g., 11.8%) recrystd.
from aq. AcOH and then from petr. ether (b. 30-60.degree.) gave pure
p-III, white crystals, m. 116-17.5.degree.. p-III heated with SOCl_2 and
then poured into NH₄OH, and the ppt. recrystd. from aq. EtOH gave the
amide, m. 158-9.5.degree.; the dried Et₂O soln. from which the acid had
been removed distd. gave 10.7 g. p-I, b₁₇ 95-101.degree., and 5.6 g. p-II,
colorless liquid, b₁₇ 135-40.degree., n_{20D} 1.5170. A similar run carried
out with a reaction time of 12 hrs. at 209-25.degree. gave 2.5 g. p-III,
m. 116-17.degree.; 8.9 g. p-I, b₁₇ 94-9.degree.; and 5.9 g. p-II, b₁₇

135-40.degree., n_{20D} 1.5172, which refractionated gave 6.1 g. pure p-II, colorless liquid, b₁₇ 136.degree., n_{20D} 1.5170, d₂₀ 0.9648, MRD 60.30. p-II treated with aq. NaOH and iodine gave p-III, m. 115.degree., and CHI₃. p-II gave a 2,4-dinitrophenylhydrazone, m. 203-7.degree., and a semicarbazone, m. 198-200.degree. (from 50% aq. EtOH). p-I (35.6 g.) oxidized 7.5 hrs. at 200-20.degree. with O in the presence of 2 g. CaCO₃ and 0.5 g. CrO₃ while being illuminated with ultraviolet light, and the mixt. worked up in the usual manner gave 4.7 g. p-III, m. 116-17.degree.; the neutral fraction rectified gave 8.1 g. p-I, n_{20D} 1.4930, and 7.3 g. p-II, colorless liquid, b₁₇ 136-8.degree., n_{20D} 1.5165. O bubbled through a vigorously stirred mixt. of 65 g. p-I, 100 cc. H₂O, 1.5 g. Na₂CO₃, and 0.25 g. stearic acid at 85.degree., the reaction continued 10 hrs., cooled, filtered, and extd. with Et₂O, the ext. dried over Drierite and evapd., and the residue fractionated gave 54.9 g. p-I, b. 97-8.degree., n_{20D} 1.4924. Dry O passed through 33.6 g. m-I, 0.5 g. CrO₃, and 2 g. CaCO₃ during 8 hrs. at 205-14.degree. while being illuminated with ultra-violet light, and the mixt. worked up in the usual manner gave 2.8 g. m-III, white crystals, m. 113-14.degree. (from aq. AcOH), which treated with SOCl₂ and poured into NH₄OH gave the amide, white crystals, m. 133-4.degree.; the neutral fraction rectified gave 9.8 g. (m-I, b₁₇ 94-6.degree., n_{20D} 1.4915); and 3.8 g. m-II, b₁₇ 132.degree., n_{20D} 1.5120, d₂₀ 0.9554, MRD 60.35. m-II treated with aq. NaOH and iodine, and the white cryst. product recrystd. from aq. AcOH gave m-III, m. 113-14.degree.. m-I gave a 2,4-dinitrophenylhydrazone, m. 160-3.degree., and a semicarbazone, m. 166-8.degree. (from 50% aq. EtOH). Dry O passed through 35.6 g. .omicron.-I, 0.5 g. CrO₃, and 2 g. CaCO₃ for 8.5 hrs. at 206-10.degree. gave in the usual manner 2.9 g. .omicron.-III, white crystals, m. 99-100.degree. (from aq. AcOH), which treated with SOCl₂ and then NH₄OH gave the amide, white crystals m. 126-7.5.degree.; the neutral fraction rectified yielded 13.4 g. .omicron.-I, b₁₄ 92-4.degree., n_{20D} 1.5020, and 2.6 g. .omicron.-II, colorless liquid, b₁₄ 116-17.degree., n_{20D} 1.5200, d₂₀ 0.9267, MRD 60.72. .omicron.-II treated with alkali and iodine gave CHI₃ and .omicron.-III, white crystals, m. 99-100.degree.. .omicron.-II gave a 2,4-dinitrophenylhydrazone, m. 135-7.degree., but no cryst. semicarbazone. The attempted oxidation of .omicron.-I with O at 155-60.degree. during 26 hrs. gave only recovered .omicron.-I, b₁₇ 95-6.degree.. .omicron.-I (33.6 g.), 0.5 g. CrO₃, and 2 g. CaCO₃ treated 9 hrs. at 205-14.degree. with O while being illuminated with ultraviolet light, and the mixt. worked up in the usual manner yielded 3.3 g. .omicron.-III, white crystals, m. 99-100.degree. (from aq. AcOH), 12.9 g. recovered .omicron.-I, b₁₇ 96-8.degree., n_{20D} 1.5030, and 4.2 .omicron.-II, b₁₇ 120-2.degree., n_{20D} 1.5203.